

MILITARY COMMUNICATIONS - ELECTRONICS BOARD



FREQUENCY RESOURCE RECORD SYSTEM (FRRS)

STANDARD FREQUENCY ACTION FORMAT (SFAF)



MCEB PUB 7

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FREQUENCY RESOURCE RECORD SYSTEM
STANDARD FREQUENCY ACTION FORMAT
FORWARD

Purpose: This document establishes the Frequency Resource Record System (FRRS) Standard Frequency Action Format (SFAF).

Authority: This document is issued under the authority of DoD Directive 5100.35, Military Communications-Electronics Board (MCEB) with changes thereto.

Amendments and Review: This document will be reviewed by the J-208B Working Group of the Frequency Panel (FP) every five years and amendments will be issued by the Military Secretary, MCEB, when appropriate. This document supersedes MCEB PUB 7 dated 1 December 1997 as amended by Change 1 dated 1 March 1998. Any suggested changes to MCEB PUB 7 can be forwarded to:

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See Appendix C

TABLE OF CONTENTS

PARAGRAPH	PAGE
FORWARD.....	i
RECORD OF CHANGES AND CORRECTIONS	ii
TABLE OF CONTENTS.....	iii
 1. GENERAL	 1
a. Purpose.....	1
b. Appendixes	1
c. Definitions	1
 2. FORMAT	 2
a. Message Format	2
b. Automated Processing Formatted Files	3
 3. PROCEDURES	 3
a. Prohibited Data Entries	4
b. Restricted Data Entries	4
c. Data Item Occurrence Identifiers.....	4
d. Receiver Location Identifiers.....	4
e. Data Item Purge Identifier	5
f. Types of Actions.....	5
 4. GENERAL RULES REGARDING TRANSACTION SECURITY CLASSIFICATION AND THE PROCESSING OF SECRET FREQUENCY ASSIGNMENT TRANSACTION DATA TO NTIA.....	 10
a. Transaction Security Classification	11
b. Processing SECRET Frequency Assignment Transactions to NTIA	15
c. Processing UNCLASSIFIED records that when aggregated together are classified CONFIDENTIAL.....	 16
 5. PROCESSING TOP SECRET (TS) DATA	 16
a. General	16
b. Software Changes to Accommodate TS Processing.....	17
 APPENDIXES	
 A GUIDE TO THE SFAF DATA ITEMS	 A-1
Annex A - List of Station Classes with Definitions.....	A-A-1
Annex B - Table of Emission Designators	A-B-1
Annex C - Geographical Abbreviations	A-C-1
Annex D - Manufacturer Codes.....	A-D-1
Annex E - JSC Minor Area Codes.....	A-E-1

Annex F – IRAC-Approved Record Notes.....	A-F-1
Annex G - List of DoD-Approved System Identifiers	A-G-1
Annex H – Standard Status Codes Used for Status Tracking.....	A-H-1
 B ACRONYMS.....	 B-1
C DISTRIBUTION	C-1
D SUMMARY OF MAJOR CHANGES	D-1

STANDARD FORMATS FOR RADIO FREQUENCY PROPOSALS, ASSIGNMENTS, MODIFICATIONS, RENEWALS, REVIEWS, AND DELETIONS

1. GENERAL

a. **Purpose.** This document describes the Standard Frequency Action Format (SFAF) used for Department of Defense (DoD) radio frequency proposals, assignments, modifications, renewals, reviews, and deletions. Frequency assignment proposals for space or earth stations may be made in either the International Telecommunication Union (ITU) Appendix 3 format or the SFAF.

b. **Appendixes.** Appendix A contains a list of SFAF data items with their input requirements. Appendix B contains a list of acronyms used throughout the document. Appendix C contains the document Distribution List. Appendix D contains a summary of major changes from the previous MCEB PUB 7 dated 1 December 1997 as amended by Change 1 dated 1 March 1998.

c. **Definitions.** The following definitions apply to terms used in processing SFAF data into the Frequency Resource Record System's (FRRS) central database.

(1) **Frequency Assignment.** A frequency assignment is an authorization to operate, within prescribed parameters, electronic equipment that emit radio frequency (RF) energy. The authorization contains the assignment's technical parameters and administrative information.

(2) **Frequency Assignment Record.** A frequency assignment record is a grouping of data entries pertaining to an authorized frequency assignment stored within a database.

(3) **Frequency Assignment Transaction.** A frequency assignment transaction (also called a proposal) is a formatted grouping of data entries used to request a new assignment, an update, or a deletion of a frequency assignment. A transaction always starts with Data Item 005 (Security Classification) and ends with the highest numbered data item used for that transaction.

(4) **Message Part.** A message part may contain one or more frequency assignment transactions. Each message part begins with Data Item 005.

(5) **Data Item.** A data item is made up of a data item number, a data item security classification indicator (if required), and the data entry.

(6) **Data Item Number.** A data item number (also referred to as a data item identifier) is used to identify each data item in an SFAF frequency assignment transaction. It consists of a unique 3-digit number followed by a period and a space. For example, (005.) is used to identify the record's security classification. Appendix A

contains a sequential listing of all valid data item numbers and applicable remarks/instructions.

(7) **Data Item Security Classification Indicator.** The data item classification indicator is used to indicate the classification of the data entry. This indicator follows the space after the data item number and is formatted using a single letter enclosed in parentheses followed by a space. The permissible entries are **(U)** for UNCLASSIFIED, **(C)** for CONFIDENTIAL, **(S)** for SECRET and **(T)** for Top Secret (for special stand-alone applications).

(8) **Data Element.** A data element is the most basic type of data entry. It consists of a series of letters and/or numbers immediately following the data item number or data item security classification indicator. Normally, one data element equates to one data item. For example, **FA** (used in Data Item 113 to denote station class) and **FT BRAGG** (used in data items 301 and 401 to show antenna location) are both data elements.

(9) **Data Entry.** A data entry may contain one or more data elements. For example, **113. FA** is a data entry consisting of the data item number (113.) and one data element (FA); **705. FIRE,ALARM** is a data entry (System Identifier) consisting of the Data Item number (705.) and two data elements: first, the primary function or purpose (FIRE), and second, the amplifying information (ALARM). Multiple data elements in the same data entry are separated by a comma or, in some cases, enclosed within parentheses e.g., **110. K6737.5(6736)**.

(a) **Single Occurring Data Entry.** A single occurring data entry may contain either one or more data elements; however, the data entry can appear only once in a frequency assignment transaction. For example, **005. UE** and **705. FIRE,ALARM** are both single occurring data entries.

(b) **Multiple Occurring Data Entry.** Data entries that appear more than once in a frequency assignment transaction are called multiple occurring data entries. In some cases, special rules apply as stated in Appendix A.

2. **FORMAT**

a. **Message Format.** Temporary SFAF frequency assignment transactions are frequently sent via the Automatic Digital Network (AUTODIN) Defense Message System (DMS). The following guidance is provided for the preparation of these messages:

(1) **Headings.** Message headings must be formatted in accordance with approved communications procedures.

(2) **Security Classification.** The overall security classification of the message is based on that of the highest classified data item or combination of data items contained therein. All messages originated or received Outside the United States and

Possessions (OUS&P) should have an appropriate releasability statement indicating whether or not the message can be released to host nation officials.

(3) **Subject.** The subject line of the message begins with FREQUENCY PROPOSAL or FREQUENCY ASSIGNMENT, followed by the appropriate clarification as required, e.g., FREQUENCY PROPOSAL, USA. For crisis or contingency requirements, include FOR CONTINGENCY COMMUNICATIONS and the UNCLASSIFIED plan name or number if available, e.g., FREQUENCY PROPOSAL FOR CONTINGENCY COMMUNICATIONS, USN (OP PLAN 207-81).

(4) **Text.** A message may contain information pertaining to more than one frequency assignment. When this occurs, Data Item 005 (Security Classification) and Data Item 010 (Type of Action) must be the first data items listed in each message part. All data items must be listed in a vertical format and be in numerical sequence. Each line in the message is limited to 69 characters (including spacing and punctuation marks). This limitation is based on the AUTODIN's maximum line-length capability and is not to be confused with the data item input length limitations specified for each data item in Appendix A. If a data item requires more than one line of text, each additional line must be preceded by the data item number or data item occurrence identifier. See paragraph 3c(1) for details on entering more than one line of text for a particular data item.

(5) **Abbreviated Message Format.** An abbreviated message format may be used for frequency proposals whose period of requirement will not exceed 90 days. At a minimum, the following data items must be included: 005, 010, 110, 113, 114, 115, 140, 141, 200, 207, 300, 301, 303, 340, 400, 401, 403, 440, 502, 701, 702, 803, and other applicable data items in the 500 data item series. For TOP SECRET, SECRET, or CONFIDENTIAL frequency proposals, include applicable SFAF data items 014-019 as required by Appendix A. Note: For Defense Communications Systems (DCS) high-frequency (HF) entry exercises, also include data items 354 and 454; for pulsed emitters also include data items 346 and 347; for aeronautical navigational aids and for air traffic control assignments also include data items 711 and 801. Note, JSMSw software requires a temporary serial number in frequency assignment proposals if permanent serial numbers are not available at the lower spectrum management offices.

b . **Automated Processing of Formatted Files.** Automated transactions prepared for transmittal from one computer to another either via the Secure Internet Protocol Routing Network (SIPRNET) or by STU-III secure devices must begin with the given file name, followed by a data string of the transaction(s) beginning with Data Item 005 through Data Item 965. These formatted files may be created on personal computers (PCs), using an editor or word processing software. The files created must be saved in the American Standard Communications Information Interface (ASCII) or equivalent text format.

3. PROCEDURES

The following procedures must be followed when using the SFAF:

a. **Prohibited Data Entries.** The following symbols should **not** be used as input data:

& (ampersand)	? (question mark)
: (colon)	< (less than)
; (semicolon)	> (greater than)
[(left square bracket)	% (percent sign)
] (right square bracket)	! (exclamation mark)
\ (reversed slant bar)	^ (Insert caret)
# (number/pound sign)	" (quotation mark)
@ (at sign)	' (apostrophe)

b. **Restricted Data Entries.** The parenthesis () cannot be used as part of text data in any data item since its use is reserved for data entry classification following the data item number(s) or as part of Data Item 110. The slant bar (/) and comma (,) are used as delimiters; however, they may also be used as part of the text in data items as indicated below.

(1) The slant bar may be used as data in data items 020, 112, 340, 343, 362, 440, 443, 462, 501, 502, 503, 504, 520, 530, and 707. To use the slant bar as a delimiter, see paragraph 3c (1).

(2) The comma can only be used as data in data items 014, 018, 108, 145, 152, 501, 503, 504, 520, 705, and 804. To use the comma as a delimiter, see paragraph 3c(2).

(3) The dash cannot be used in data items 301 and 401.

c. **Data Item Occurrence Identifiers.** Slant bars and commas may be used as data item occurrence identifiers as indicated below:

(1) **Slant Bars.** Slant bars are used to identify the order of occurrence of such data when modifying an existing record (e.g., **500/2. S165**).

Order of occurrence identifiers are not used for free-text data items when each line begins with only the 3-digit number (e.g., data items 502, 520, 531, 801, and 804).

(2) **Commas.** Commas are used to separate elements within a data entry (e.g., **705. FIRE,ALARM**). However, commas and slant bars cannot be used interchangeably; that is, if input instructions specify a comma, a slant bar cannot be used and vice versa.

d. **Receiver Location Identifiers.** Receiver location identifiers consisting of the letter R and a 2-digit number (01 through 30) are used to indicate whether the data is associated with the first, second, third, etc., receiver location. The receiver location identifier is entered immediately following the data entry reported for that data item. Consider, for example, **400. CO,R02** in which **400.** (State/Country) is the data item

identifier, **CO** (Colorado) is the data entry for that item, and **R02** indicates that the data applies to the second receiver location. Note: If no receiver location identifier is specified, the first occurrence is assumed (e.g., **400. CO**).

e. **Data Item Purge Identifier.** A dollar sign following a data item number (e.g., **152. \$**) indicates that the data item is to be purged from the existing record. If a data entry contains more than one data element, then the entire entry is deleted. If a data item contains multiple data entries, the order of occurrence of the entry(ies) to be purged must be specified. Consider for example, **207/2. \$**. In this example, the data item occurrence identifier (**/2**) indicates that only the second operating unit designator in the record is to be purged. All remaining entries will be automatically renumbered during the purge process. Note: If a data item occurrence identifier is not specified, the first occurrence is assumed (e.g., **207. \$**). A data item being purged cannot be followed by an entry to add data in the same data item, except for data items 502, 520, 531, and 804, which are discussed in Appendix A.

f. **Types of Actions.** Six types of actions are used for the input of SFAF frequency assignment transactions (see Appendix A, Data Item 010). A combination of all types can be included in one multiple part message or in an automated transaction file. Formats used for each type of action are described below.

(1) **New (N).** The New action can be used to create frequency assignments from one or more message parts.

(a) **Creating a Frequency Assignment Using One Message Part.** If one frequency is assigned to a transmitter location, a frequency assignment can be generated using a single message part. Figure 1 is an example of a frequency assignment proposal (or transaction) used to create one HF assignment.

(2) **Modification (M).** The Modification action is used to modify frequency assignments; however, it cannot be used to modify the agency serial number, frequency, or transmitter state/country data items. At a minimum, data items 005, 010, 102, 110, 144 (203 for Army US&P actions), 300, 301, 701, 702, 803, and any data items to be modified or deleted, will be included. For TOP SECRET, SECRET, or CONFIDENTIAL frequency proposals, include applicable SFAF data items 014-019 as required. (See Appendix A.) When a data item is to be modified, include the data item number and the new data entry. The computer processor automatically deletes the old data entry except for data items 502, 520, 531, and 804; in which case, the new data entry is added to the existing data entry unless those data items are preceded by the data item number and a dollar sign as described in paragraph 3e. See paragraph 4a(3)(f) for modifying classified information in data items 502, 520, 531, and 804. All data items used will be listed in the same sequence as they appear in Appendix A.

Figure 2 is an example of a message frequency proposal (or transaction) used to change Data Item 114, delete the old Data Item 502 data entry, and add a new Data Item 502 data entry.

The receiver location identifier must be used to modify data items when multiple receivers are involved. For example, if the third occurrence of antenna gain for the second receiver location is to be modified, it would be formatted as **457/3. 12,R02**.

```
005. UE
010. N
102. AF 881234
110. K4726.5(4725)
113. FA
114. 3K00J3E
115. K10
130. 1HX
144. O
200. USAF
201. CINCPAC
202. PACAF
204. ACC
205. 5AF
206. 475ABW
207. 1956CG
209. JJPN
209/2. JPAC
300. J
301. TOKOROZAWA
303. 354750N1393844E
340. G,AN/GRC-212
343. 5737
357. 9
362. S
363. H
400. J
401. OWADA
403. 354645N1393254E
406. 3000
440. G,AN/GRC-212
443. 5737
457. 6
462. S
463. H
500. E029
502. AF-OR-CHANNEL. USAF MANAGED ASSIGNMENT
701. T08
702. ACC 88-005
705. COMMANDER,GIANT TALK
```

Figure 1. A Frequency assignment proposal (or transaction) used to create one HF assignment.

FROM JFP MCEB WASHINGTON DC//NAVEMSCEN//
 TO JFMO PAC HONOLULU HI
 AIG 8788
 INFO CINCPACFLT PEARL HARBOR HI//5//
 NCTAMS WESTPAC GQ//FM0//
 C O N F I D E N T I A L^a//N02420//
 SUBJ: FREQUENCY MODIFICATION USN (U)
 A. JFMO PAC HONOLULU HI 021232Z APR 82
 1. THE FOLLOWING RESPONDS TO YOUR REQUEST REF A.
 005. CH,DEOADR
 010. M
 014. 19910520, CINCPAC OP PLAN 91-003
 015. DATA ENTRIES NOT PRECEDED WITH (C) OR (S) ARE UNCLASSIFIED
 102. N 773101
 110. K16235
 113. FX
 114. (C) 12K0B9W
 115. K10
 144. O
 300. J
 301. TOTSUKA
 502. \$
 502. (C) TO SATISFY REQUIREMENT FOR TWO ADDITIONAL VOICE
 502. (C) CHANNELS DCS 77BB01 DURING CONTINGENCY OPS.
 701. 312
 702. NESC 91-001
 803. KEITH VAN BLARCOM, DSN 653-0104

^aClassified for illustration purposes only

Figure 2. Message part frequency proposal (or transaction) used to modify an existing frequency assignment.

Frequency assignment records are normally reviewed every five years or whenever the assignment is modified. The following data items must be submitted when only the review date is to be changed: 005, 010, 102, 110, 144, (203 for Army US&P actions), 300, 301 (504 for Interdepartment Radio Advisory Committee (IRAC) records), 701, 702, and 803. For TOP SECRET, SECRET, or CONFIDENTIAL frequency proposals, include applicable SFAF data items 014-019 as required by Appendix A. Data items 400 and 401 are also required for satellite downlink receivers. Figure 3 is an example of a frequency assignment proposal (or transaction) used to update a record's review date.

(3) **Deletion (D).** The following data items are required to delete an entire frequency assignment record from the FRRS central database: 005, 010, 102, 110, 144 (203 for Army US&P actions), 300, and 301. For TOP SECRET, SECRET, or CONFIDENTIAL frequency proposals, include applicable SFAF data items 014-019 as required. (See Appendix A.) Data items 400 and 401 are also required for satellite downlink receivers. Figure 4 is an example of a frequency proposal (or transaction) deleting an assignment from the FRRS central database.

```

005. UE
010. M
102. AR 733489
110. M32.05
144. Y
203. WS
300. NM
301. WHITESANDS MISSILE RANGE
504. RECORD REVIEW - NO CHANGES
701. A04
702. WSMR91102105
803. T. BANKS, DSN 235-6010

```

Figure 3. A frequency proposal (or transaction) used to update a record's review date.

```

005. UE
010. D
102. AF 748121
110. M9375
144. Y
300. TX
301. BERGSTROM
701. T06
702. ACC 81-171
803. B. BERRY, DSN 471-7050

```

Figure 4. A frequency proposal (or transaction) used to delete a frequency assignment record from the FRRS central database.

(4) **Notification (F).** This type of action is to be used to notify IRAC that a frequency authorized under a group assignment is being brought into use. This action is based on the authority granted previously by IRAC and when the assignment being created is to be stored in a Government Master File (GMF). The Notification action is formatted the same as a New action, except that the agency serial number of the group assignment record stored in the GMF must be entered in Data Item 105. The Notification action is limited to Military Departments (MILDEPs)/AGENCY USE ONLY.

(5) **Renewal (R).** Frequency assignment records are normally reviewed prior to their expiration date or whenever they are modified. When only the expiration date is to be changed, the following data items will be submitted: 005, 010, 102, 110, 141, 144 (203 for Army US&P actions), 300, 301, 701, 702, and 803. For TOP SECRET, SECRET, or CONFIDENTIAL frequency proposals, include applicable SFAF data items 014-019 as required. (See Appendix A.) Data items 400 and 401 are also required for satellite downlink receivers. Enter other data items in the 700 series if applicable. If the record contains Data Item 141 (Expiration Date), and if data items other than Data Item 141 must be updated, a Renewal (R) action must be used, and the other data items must be modified as outlined in paragraph 3f(2). Figure 5 is an example of a frequency proposal (or transaction) used for a renewal action.

005. CE,DEOADR ^a 010. R 102. AR 774489 110. M148.025 141. 19920613 144. Y 203. DW 300. DC 301. WASHINGTON 701. A04 702. MDW0911222 803. SSG SMITH, DSN 335-2486
^a Classified for illustration purposes only

Figure 5. A frequency proposal (or transaction) used for a Renewal action.

(6) **Administrative Modification (A).** This type of action is used to make changes in the three general categories outlined below.

(a) **Typographical Corrections.** These changes are made to correct information in a database record that is different from that contained in the official document (i.e., the GMF record for US&P assignments).

(b) **Changes to Administrative Data Items.** Changes to administrative data (e.g., the 200 series and/or other non-IRAC data items) are made for standardization or reorganizational reasons, etc. Guidance concerning data items that may be changed for these reasons will be disseminated by a MILDEP, an agency, or a Commander-in-Chief (CINC) directive.

Computer editing will be applied to all data items, and the Review Date (Data Item 142) will not be changed unless it is specifically included in the administrative modification request. Input requirements are usually the same as those required for a Modification action (paragraph 3f(2)). In all cases, authority for administrative changes will be the Joint Frequency Panel (JFP) or the appropriate MILDEP, agency, Frequency Management Office (FMO), or CINC. Figure 6 is an example of a change made to data items 204 and 205.

(c) **Multiple Record Changes.** Multiple record changes (i.e., identical modifications to 25 or more records) are often required for compliance with international, national, or DoD rules and regulations. Changes to less than 25 records must be processed as individual transactions. Requests for multiple record changes may be made by letter or E-mail. The request must indicate the type of action (Data Item 010 equals M or A) and whether the action to be submitted to the National Telecommunications and Information Administration (NTIA) is to be processed as a record in which Data Item 144 equals Y.

005. UE
010. A
102. AR 834002
110. M36.510
144. N
203. PA
204. USARPAC
205. 1106SIGBDE
300. HI
301. FT SHAFTER
701. A04
702. KDH091102199
803. K.D. HOLTON, DSN 315-438-8219

Figure 6. A frequency proposal (or transaction) used to administratively change an existing database record.

Under current procedures, multiple record changes submitted to NTIA through the Joint Spectrum Center (JSC) processor will result in changing the Revision Date (Data Item 143) in the GMF and the Review Date (Data Item 142) in the FRRS record. Multiple record changes submitted to NTIA via the Frequency Assignment Subcommittee (FAS) representative will result in only the requested data item being changed and the Revision Date will not be changed in the GMF record; in this situation, a copy of the same request must be forwarded to the JSC where an Administrative Modification action will be taken.

Multiple record change requests must also indicate the select criteria required to identify the records that are to be changed and the data items that are to be modified. Multiple record change requests should be carefully thought out and precisely worded to prevent inadvertent modification of nonapplicable records. Input requirements may be supplied by using either the data item number or narrative text. For example:

1. If Data Item 200 equals United States Air Force (USAF) or joint service (JNTSVC) and (a) the agency serial number starts with AF and (b) Data Item 207 equals 376SW, change Data Item 207 to 388SW. Process multiple record changes with Data Item 010 equal to A and Data Item 144 equal to N.

2. If Data Item 200 equals USA and Data Item 114 equals 6K00A3E, change Data Item 114 to 6K00B9W. If Data Item 144 equals Y, enter Data Item 010 as M. If Data Item 144 equals O, U, or blank, enter Data Item 010 as A.

4. GENERAL RULES REGARDING TRANSACTION SECURITY CLASSIFICATION AND THE PROCESSING OF SECRET FREQUENCY ASSIGNMENT TRANSACTION DATA TO NTIA.

The FRRS central database contains UNCLASSIFIED, CONFIDENTIAL, and SECRET data, plus data requiring special handling instructions (see special handling codes listed under Data Item 005 in Appendix A). The following rules apply to the transaction security classification of such data and to the processing of SECRET frequency

assignment transactions submitted to NTIA. See paragraph 5 for the processing of Top Secret (TS) Data.

a. Transaction Security Classification.

(1) **Data Item 005 (Security Classification).** Data Item 005 is required for all SFAF frequency assignment transactions. For New actions, Data Item 005 must contain the record's security classification and any special handling instructions (note that special handling codes are mandatory for proposals that require OUS&P coordination. For Modification and Deletion actions, Data Item 005 must show the security classification and special handling instructions of the record to be modified or deleted; therefore, the security classification shown in Data Item 005 may be different from the actual security classification of the message or data file used to modify or delete the record. For example, a message or data file containing changes to an UNCLASSIFIED data item in a classified record is, by itself, UNCLASSIFIED unless the change contains data items that are considered classified when listed together. Therefore, an “S” or “C” entered in Data Item 005 of a Modification or Deletion action does not necessarily make that message or data file classified; it only indicates the security classification of the existing SFAF record that is to be acted upon.

(2) **Data Item 006 (Security Classification Modification).** Data Item 006 is only used in conjunction with Data Item 005 to change the security classification, special handling code, or declassification/review instructions of an existing SFAF record. Data Item 005 will contain the record's security classification and special handling instructions as they presently exist, and Data Item 006 will contain the new security classification, special handling code, and declassification/review instructions. Once again, the security classification of the message or data file containing the modification is based solely on the overall content of the message or data file.

(3) **Classification Guide and Entry Procedures for SECRET or CONFIDENTIAL data items.** The following guidelines and procedures apply to classified data items.

(a) For the SFAF, SECRET and CONFIDENTIAL data must be identified by entering an S or C security classification indicator within the parentheses immediately following the data item number (see Figure 7, Data Item 114/2). A (U) is not required for UNCLASSIFIED data items if the sentence **DATA ITEMS NOT IDENTIFIED AS CLASSIFIED ARE UNCLASSIFIED** is included on the line following the security classification of the message or if Data Item 015 contains: “**DATA ENTRIES NOT PRECEDED WITH (C) OR (S) ARE UNCLASSIFIED**”. The security classification indicator is not considered part of the data entry and is therefore not included in the maximum number of data characters permitted. Special handling codes are not entered at the data item level; they are entered only with the overall record security classification in Data Item 005.

C O N F I D E N T I A L ^a
 DATA ITEMS NOT IDENTIFIED AS CLASSIFIED ARE UNCLASSIFIED
 SUBJ: FREQUENCY ASSIGNMENT PROPOSAL - USAF (U)
 005. CK,DEOADR
 010. N
 014. 19880311, PACAF OP PLAN 88-002
 015. DATA ENTRIES NOT PRECEDED WITH (C) OR (S) ARE UNCLASSIFIED
 102. AF 882345
 110. K7624.5(7623)
 113. FX
 113/2. FX
 113/3. FA
 113/4. FA
 114. 3K00J3E
 114/2. (C) 800H00J2B
 114/3. 3K00J3E
 114/4. (C) 800H00J2B
 115. (C) W400
 115/2. (C) W400
 115/3. (C) W20
 115/4. (C) W20
 130. 3HX
 140. 19881012
 144. Y
 200. USAF
 201. CINCPAC
 202. PACAF
 204. PACAF
 205. 13AF
 206. 3CSG
 207. ANDERSEN
 209. JGUM
 209/2. JPAC
 300. GUM
 301. ANDERSEN
 303. 134901N1453330E
 340. (C) G,AN/URG99X
 343. 9999
 357. 9
 362. S
 363. H
 400. HI,R01
 400. GUM,R02
 400. (C) PAC,R03
 401. WAHIAWA,R01
 401. FINEGAYAN,R02
 401. (C) AIRCRAFT,R03
 403. 212529N1580540W,R01
 403. 133455N1445050E,R02
 440. (C) G,AN/URG99X,R01
 440. (C) G,AN/URG99X,R02
 440. (C) G,AN/URG99X,R03
 443. 9999,R01
 443. 9999,R02
 457. 9,R01
 457. 9,R02
 457. 9,R03
 462. S,R01
 462. S,R02
 462. S,R03
 463. H,R01
 463. H,R02
 463. H,R03
 500. S141
 502. (C) REQUIRED TO SUPPORT CONTINGENCY AND RECONNAISSANCE
 502. (C) IN THE PACIFIC AREA.
 701. T08
 702. PACAF 88-0001
 705. (C) COMMANDER,BLUE GOOSE
 707. 253-11
 803. JOE DOKES, DSN 335-1825

^aClassified for illustration purposes only

Figure 7. Example of an older frequency proposal (or transaction) message part with classified and UNCLASSIFIED multiple transmitter and receiver data.

(b) Frequency assignment records maintained in the DoD automated central database cannot be classified higher than SECRET.

(c) Data items are generally classified according to their individual content. However, there may be instances where UNCLASSIFIED data items become classified when associated with other UNCLASSIFIED or classified data items or where CONFIDENTIAL data items may become SECRET when associated with other CONFIDENTIAL or SECRET data items. For example, the frequency, equipment nomenclature, location, emission designation, and power data items may be UNCLASSIFIED as individual data items but become classified when grouped together or when subsets are grouped in various combinations. Therefore, since it is not cost-effective to try to identify the various combinations, all data items within the group must be given the same security classification. The security classification of data items and records with special handling instructions is normally based upon information derived from a source document such as a Security Classification Guide (SCG) or Operations Plan. The identification of this source document must be included in Data Item 014.

(d) Paragraph 3f(1) and Figure 1 show how to create UNCLASSIFIED records and explain the relationship of data item numbers. The following subparagraphs (1 and 2) refer to the data items shown in Figure 7.

1. The special handling code for the overall record is entered only in Data Item 005. Nowhere else in the record should special handling code information be entered except for those records not covered by an existing code. In such cases, free-text special handling instructions may be placed in data items 502 or 503.

2. The Description of Requirement (Data Item 502) provides a description of the assignment and is classified CONFIDENTIAL. Note that although this single data item is entered in paragraph form, the data item number and security classification appear on both lines.

(e) Declassification of the entire record (Figure 7) would require the entry of the present record security classification (**005. CK,DEOADR**), followed by the Security Classification Modification data item (**006. U**) and the other data items necessary for a modification as indicated in paragraph 3f(2). This modification would not change the data content, but would change all CONFIDENTIAL data items to UNCLASSIFIED and remove the special handling restriction.

(f) Paragraph 3f(2) explains the format used to modify UNCLASSIFIED frequency assignments. Figure 8 shows how to modify the classified data items shown in Figure 7. The following subparagraphs (1 through 5) refer to the data items shown in Figure 8.

1. The complete record classification (Data Item 005) must be reentered. Any other security related items (Data items 014-019) must also be reentered. Any changes or additions are made to data items 1014-019 where necessary. These repeat entries are necessary so the modification transaction can be properly handled and protected until the changes are merged into the master database record.

<p>CONFIDENTIAL^a DATA ITEMS NOT IDENTIFIED AS CLASSIFIED ARE UNCLASSIFIED SUBJ: FIVE-YEAR REVIEW (U) 005. CK,DEOADR 010. M 006. CK,DEX4 014. 19960105, PACAF OP PLAN 96-001 015. DATA ENTRIES NOT PRECEDED WITH (C) OR (S) ARE UNCLASSIFIED 102. AF 882345 110. (C) K7624.5(7623) 115. (C) K1.5 115/2. W20 115/4. W20 144. O 300. J 301. TACHIKAWA 502. JOINT RESPONSIBILITY OF PACAF AND ACC. 701. T08 702. ANG 79-063 803. JOHN DOE DSN 335-1825</p>
<p>^aClassified for illustration purposes only</p>

Figure 8. Example of a frequency proposal (or transaction) message part used to modify a classified record.

2. The record classification instructions are modified by entering Data Item **006. CK,DEX4** and a new operations plan is reflected in the derivative classification authority (Data Item 014).

3. The first power data entry in Data Item 115 has been increased from W400 to K1.5. Note that the security classification had to be reentered. The second and fourth power data entries (data items 115/2 and 115/4) were downgraded to UNCLASSIFIED (these power data entries could also have been entered as **115/2. (U) W20** and **115/4. (U) W20**). Since there was no change to the third power data entry, no data was entered.

4. Data Item 502 may be entered by using the purge-and-replace technique as follows:

502. \$
502. New Data

Note: If the purge-and-replace technique is **not** used, carefully follow the rules stated in subparagraph 4 below.

5. The new data entry in Data Item 502 is automatically added to the existing data entry shown in Figure 7. If the existing data was to be deleted, a purge identifier (e.g., **502. \$**) would have been inserted on the line preceding the new data entry (see paragraph 3e). **IMPORTANT! THE SECURITY CLASSIFICATION OF A NEW ENTRY WILL AUTOMATICALLY PURGE AND REPLACE THE SECURITY CLASSIFICATION OF THE EXISTING ENTRY.** Therefore, because of the importance of this unique feature, the rules in Table 1 must be followed to ensure that the entire data item is properly classified whenever it is modified. After being modified, Data Item 502 would appear in the record as follows:

502. REQUIRED TO SUPPORT CONTINGENCY AND RECONNAISSANCE
502. IN THE PACIFIC AREA.

502. JOINT RESPONSIBILITY OF PACAF AND ACC.

Note that in the preceding example the entire Data Item 502 entry was downgraded (**IN ERROR!**) from CONFIDENTIAL to UNCLASSIFIED because the new data entry was not classified CONFIDENTIAL. The **correct** data entry should have been:

502. (C) JOINT RESPONSIBILITY OF PACAF AND ACC.

Table 1 - Rules for Classifying Data Items 502, 520, and 531

R U L E	If the classification of the existing data is:	and the classification of the new data being added is:	then the classification symbol to be entered with the new data must be:
1 2 3	(no data) " "	UNCLASSIFIED CONFIDENTIAL SECRET	blank or (U) (C) (S)
4 5 6	UNCLASSIFIED " "	UNCLASSIFIED CONFIDENTIAL SECRET	blank or (U) (C) (S)
7 8 9	CONFIDENTIAL " "	UNCLASSIFIED CONFIDENTIAL SECRET	(C) (C) (S)
10 11 12	SECRET " "	UNCLASSIFIED CONFIDENTIAL SECRET	(S) (S) (S)

b. Processing SECRET Frequency Assignment Transactions to NTIA. The NTIA automated database contains only UNCLASSIFIED and CONFIDENTIAL data; therefore, JSC does not include SECRET data in those transactions sent to NTIA via automated data transfer. SECRET data, however, is forwarded to NTIA in "Code Z" docket form and is stored there in classified containers for reference and coordination. Neither the JSC nor NTIA processes or stores data in a manner other than as indicated above. If an assignment contains TOP SECRET data, the submitting organization should omit such data and include a comment in the transaction, such as "additional information is not available without a higher clearance, contact the submitting agency." Use of data items shown in Table 2 will determine which organizations are to see the comment and in which database(s), if any, the comment is to be stored.

The following rules apply when Data Item 110 (Frequency) is classified SECRET and when Data Item 144 (Record Indicator) is equal to Y (assignment record is to be processed through IRAC).

(1) If Data Item 110 or Data Item 102 (Agency Serial Number), is classified SECRET, the JSC will process these records and forward them to NTIA only in document form, using NTIA "Z" docket format procedures. The records will be placed before the FAS as SECRET agenda data items. The JSC will NOT include any portion of such records in the automated files forwarded to NTIA.

Table 2 - Visibility of Comments

Item	Seen by:	Where stored:
502	DoD only	FRRS central database
503	All US government agencies	In both the GMF and the FRRS central database
504	DoD and all US government agencies	Not stored in any database
801	DoD only	Not stored in any database

(2) NTIA is planning to change GMF automated processing procedures to accept SECRET data. When that happens Z docket procedures will be phased out and all SECRET data will be sent to NTIA in automated form.

c. **Processing UNCLASSIFIED records that when aggregated together are classified CONFIDENTIAL.** The grouping together of all UNCLASSIFIED records in the FRRS makes the group CONFIDENTIAL.¹ Further, the grouping together of all of the Army or all of the Navy or all of the Air Force or all of the National Security Agency (NSA) UNCLASSIFIED FRRS records, also makes these groups of records classified CONFIDENTIAL. In order to identify these records when they are separated from the individual groups discussed above, a special handling code will be entered in each UNCLASSIFIED record that meets the criteria specified in Section 3 of the *DoD Frequency Assignment Security Classification Guide*. There is an exemption to the grouping of assignments together. UNCLASSIFIED frequency assignments to DoD stations that are operating on frequencies authorized to non-Federal-Government stations where such utilization is necessary for intercommunication with non-Federal-Government stations or required for coordination with non-Federal-Government activities are exempt from the requirements of the *DoD Guide*.

5. PROCESSING TOP SECRET (TS) DATA.

a. **General.** In addition to processing SECRET and CONFIDENTIAL data as described in paragraph 4, the JSMSw system is capable of processing, up to TS, FRRS data in the stand-alone mode. TS level users are normally located in Secure Compartmented Information Facilities (SCIFs) and **WILL NOT** be exchanging data with other FRRS users via the **SECRET** level SIPRNET. TS users in SCIFs may exchange data with staff in other SCIFs; however, the data will be passed via networks capable of handling TS data.

¹MCEB-M-019-98, 26 Jan 1998, *DoD Frequency Assignment Security Classification Guide*.

b. Software Changes to Accommodate TS Processing. The major JSMSw software changes applicable to FRRS SFAF frequency assignment data in the TS environment are as follows:

(1) The letter “T” is acceptable as an entry in the ‘security classification of the record’ portion of SFAF Data Item 005.

(2) Additional special handling codes are permitted in SFAF Data Item 005.

(3) The letter (T) is permitted as a valid data entry in the Data Item Security Classification Indicator.

(4) The letter “S” is acceptable as a ‘new classification level’ data entry in Data Item “**503. DNG,**”.

(5) Certain validation checks pertaining to the above three areas have been changed to accept the new data.

APPENDIX A - GUIDE TO THE SFAF DATA ITEMS

1. All data items listed in this appendix are not required for every frequency assignment transaction. Required data items are based on type of radio service, i.e., radionavigation, aeronautical radionavigation, space, etc. Data item numbers not listed are reserved for future use.
2. Data items marked with endnote² are reserved for use by headquarters of the Army, Navy, Air Force, Defense Information Systems Agency (DISA), NSA, and CINCs. Agencies may authorize use of these data items by subordinates, as desired.
3. The information presented for each data item is formatted as follows: Each data item starts with the data item name and number in bold print. The second line begins with the maximum number of characters (including spaces) that can be entered for that data element. The maximum number of characters does not include the data item number itself, the slash (if present), the occurrence identifier, the period and space following the data item number, the security classification indicator (U, C, S, or T) when present, the space following the security classification indicator or the receiver location identifier. The maximum number of characters is followed by the maximum number of occurrences allowed to be entered in a single database record or at each receiver location in a single database record.
4. Since many data items are recognized by NTIA, the GMF tag is included for reference purposes. The INPUT REQUIREMENT contains the rules for submission and any examples needed for clarification of the rules of submission.
5. Table A1 lists the SFAF data item number, title, Joint Spectrum Management System for Windows (JSMSw) tag, the data element maximum input length, the maximum number of occurrences permitted in a database record and also indicates whether or not the data item is forwarded to NTIA. In those few instances where the number of characters sent to NTIA is less than the input length, the number of characters sent to NTIA is included in the To IRAC column.

TABLE A1 SUMMARY OF DATA ITEM SPECIFICATIONS

SFAF Data Item Number	Title	JSMSw Tags/ Spectrum XXI Tags	Maximum Input Lengths	Maximum Occurrences	To IRAC ^a	GMF Tags
ADMINISTRATIVE DATA						
005	Security Classification	CLA,CDD,FOI ^m	2,10	1	Y	CLA, CDD, FOI ^c
006	Security Classification Modification	CLA,CDD,FOI ^m	2,10	1	Y	CLA, CDD, FOI ^c
007 ^h	Missing Data Indicator	MSD	1	1	Y	MSD
010	Type of Action	TYP	1	1	Y	TYP
014	Derivative Classification Authority	CLF	8,60	10	Y35	*CLF
015	Unclassified Data Fields	CLU	72	1	Y35	*CLU
016	Extended Declassification Date	CDE	35	1	Y	*CDE
017	Downgrading Instructions	DNG	1,8	1	Y	*AGN,DNG
018	Original Classification Authority	OCA	60	1	Y35	*CLA
019	Reason for Classification	CLR	35	1	Y	*CLR
020	Proposal References		64	10	N	
102	Agency Serial Number	SER	10	1	Y	SER
103	IRAC Docket Number	AUS	8	3	N ⁱ	AUS
105	List Serial Number	LSN	10	1	Y	LSR
106 ^f	Serial Replaced, Delete Date	SRS,SEX	10,8	1	Y	SRS,SEX
107	Authorization Date	AUD	8	1	N ⁱ	AUD
108	Docket Numbers of Older Authorizations	DOC	35	30	Y	*DOC
EMISSION CHARACTERISTICS						
110	Frequency(ies)	FRQ,FRU	11,11-11,11(11)	1	Y	FRQ,*FRB
111	Excluded Frequency Band	FBE	23	30 ^b	Y	*FBE
112	Frequency Separation Criteria		35	1	N	
113	Station Class	STC	4	20	Y	STC
114	Emission Designator	EMS	11	20	Y	EMS
115	Transmitter Power	PWR	9	20	Y	PWR
116	Power Type		1	20	N	
117	Effective Radiated Power		6	20	N	
118 ^j	Power/ERP Augmentation		1	20	N	
TIME/DATE INFORMATION						
130	Time	TME	4	1	Y	TME
131	Percent Time		2	1	N	
140	Required Date		8	1	N	
141	Expiration Date	EXD	8	1	Y	EXD
142	Review Date		8	1	N	
143	Revision Date	RVD	8	1	N ⁱ	RVD
144	Record Indicator		1	1	N	
145	ITU BR Registration		1,20	1	N	
146	DCS Trunk ID		6	20	N	
147	Joint Agencies	JNT	4	20 ^b	Y	*JNT
151	Coordination Indicator	ICI	1	1	Y	ICI
152	Coordination Data	CAN,MEX,USA	1,35	30 ^b	Y	*CAN,*MEX *USA

TABLE A1 SUMMARY OF DATA ITEM SPECIFICATIONS

SFAF Data Item Number	Title	JSMSw Tags/ Spectrum XXI Tags	Maximum Input Lengths	Maximum Occurrences	To IRAC ^a	GMF Tags
ORGANIZATIONAL INFORMATION						
200	Agency		6	1	N	
201	Unified Command		8	10	N	
202	Unified Command Service		8	10	N	
203	Bureau	BUR	4	1	Y	BUR
204	Command		18	1	N	
205	Subcommand		18	1	N	
206	Installation Frequency Manager		18	1	N	
207	Operating Unit		18	10	N	
208	User Net/Code	NET	6	10	Y5 ^d	NET
209	Area AFC/DoD AFC/ Other Organizations		18	10	N	
TRANSMITTER LOCATION DATA						
300	State/Country	XSC	4	1	Y	XSC
301	Antenna Location	XAL	24	1	Y	XAL
302	Station Control	XRC	18	1	Y8	XRC
303	Antenna Coordinates	XLA XLG	15	1	Y	XLA XLG
304	Call Sign	XCL	10	1	Y8	XCL
306	Authorized Radius	XRD	5	1	Y	*RAD
SPACE STATIONS						
315	Equatorial Inclination Angle	XIN	4	1	Y	*ORB
316	Apogee	XAE	5	1	Y	*ORB
317	Perigee	XPE	5	1	Y	*ORB
318	Period of Orbit	XPD	7	1	Y	*ORB
319	Number of Satellites	XNR	2	1	Y	*ORB
321	Power Density	SPD	4	1	Y	SPD
TRANSMITTER EQUIPMENT						
340	Equipment Nomenclature	XEQ	1,18	10	Y	*EQT
341	Number of Stations, System Name	NTT,NAM	5,29	3	Y	*NRM
342 ^j	Aircraft Nautical Mile Value	XNM	4	1	N	*RAD
343	Equipment Allocation Number		7	10	Y	*AGN,JFA
344 ^h	Off-the-shelf Equipment	EQS	6	10	Y	*EQS
345	Radar Tunability	TUN	2	1	Y	*EQT
346	Pulse Duration	PDD	9, 9-9	30 ^b	Y	*EQT
347	Pulse Repetition Rate	PRR	9, 9-9	30 ^b	Y	*PRR
348	Intermediate Frequency		11	1	N	
349	Sidelobe Suppression		1	1	N	
TRANSMITTER ANTENNA DATA						
354	Antenna Name	XAT	10	10	Y	XAD
355	Antenna Nomenclature	XAK	18	10	Y	*EQT
356	Antenna Structure Height	XHT	3	10	N	
357	Antenna Gain	XAG	4	10	Y	XAD,*EGN, *SGN
358	Antenna Elevation	XSE	5	10	Y	XAD

TABLE A1 SUMMARY OF DATA ITEM SPECIFICATIONS

SFAF Data Item Number	Title	JSMSw Tags/ Spectrum XXI Tags	Maximum Input Lengths	Maximum Occurrences	To IRAC ^a	GMF Tags
359	Antenna Feedpoint Height	XAH	5	10	Y	XAD
360	Antenna Horizontal Beamwidth	XBW	4	10	Y	XAD,*EBW, *SGW
361	Antenna Vertical Beamwidth		3	10	N	
362	Antenna Orientation	XAZ,XAA	3 3,3 3,3-3 3,3/3	10	Y	XAZ,XAD
363	Antenna Polarization	XAP	1	10	Y	XAP
373 ^j	JSC Area Code		1	1	N	
374	ITU Region		1	1	N	
RECEIVER LOCATION DATA (Maximum receiver locations allowed: 30)^k						
400	State/Country	RSC	4	1	Y	RSC
401	Antenna Location	RAL	24	1	Y	RAL
402	Receiver Control	RRC	18	1	Y8	RRC
403	Antenna Coordinates	RLA RLG	15	1	Y	RLA RLG
404	Call Sign	RCL	10	1	Y8	ACL
406	Authorized Radius	RRD	4	1	Y	*RAD
407 ^j	Path Length		5	1	N	
408	Repeater Indicator	RPT	1	1	Y	*RPT
SPACE STATIONS (Maximum receiver space stations allowed: 30)^k						
415	Equatorial Inclination Angle	RIN	4	1	Y	*ORB
416	Apogee	RAE	5	1	Y	*ORB
417	Perigee	RPE	5	1	Y	*ORB
418	Period of Orbit	RPD	7	1	Y	*ORB
419	Number of Satellites	RNR	2	1	Y	*ORB
RECEIVER EQUIPMENT (Maximum receiver locations allowed: 30)^k						
440	Equipment Nomenclature	REQ	1,18	10	Y	*EQR
442	Aircraft Nautical Mile Value	RNM	4	1	N ⁱ	*RAD
443	Equipment Allocation Number		7	10	N	
RECEIVER ANTENNA DATA (Maximum receiver locations allowed: 30)^k						
454	Antenna Name	RAT	10	10	Y	RAD
455	Antenna Nomenclature	RAK	18	10	Y	*EQR
456	Antenna Structure Height		3	10	N	
457	Antenna Gain	RAG	4	10	Y	RAD,*SGN, *EGN
458	Antenna Elevation	RSE	5	10	Y	RAD
459	Antenna Feedpoint Height	RAH	5	10	Y	RAD
460	Antenna Horizontal Beamwidth	RBW	4	10	Y	RAD,*EBW, *SBW
461	Antenna Vertical Beamwidth		3	10	N	
462	Antenna Orientation	RAZ,RAA	3 3,3 3,3-3	10	Y	RAZ,RAD
463	Antenna Polarization	RAP	1	10	Y	RAP
SPACE SYSTEMS (Maximum receiver locations allowed: 30)^k						
470	Space Station Noise Temperature	SNT	4	10	Y	*SNT

TABLE A1 SUMMARY OF DATA ITEM SPECIFICATIONS

SFAF Data Item Number	Title	JSMSw Tags/ Spectrum XXI Tags	Maximum Input Lengths	Maximum Occurrences	To IRAC^a	GMF Tags
471	Earth Station System Noise Temperature	RNT	4	10	Y	*RNT
472	Equivalent Satellite Link Noise Temperature	ENT	4	10	Y	*ENT
473	JSC Area Code		1	1	N	
SUPPLEMENTARY DETAILS						
500	IRAC Notes	NTS	4	10	Y	NTS
501	Notes free-text Comments	NOT	35	30 ^b	Y	*NTS
502	Description of Requirement	GEN	1440	1	N	
503	Agency Free-text Comments	AGN	35	30 ^b	Y	*AGN
504	FAS Agenda or OUS&P Comments	FAS	72	5	Y	FAS
505	NATO Pooled Frequency Code Number		5	1	N	
520	Supplementary Details	SUP	1080	1	Y	SUP
530	Authorized Areas	XAR,RAR,ARB	3,35	30	Y	*ART,*ARR,*ARB
531	Authorized States	LST,LSR,LSB, EST,ESR,ESB	3,35	6	Y	*LST,*LSR,* LSB,*EST,* ESR,*ESB
OTHER ASSIGNMENT IDENTIFIERS						
701	Frequency Action Officer		3	1	Y	*AGN,FAO
702	Control/Request Number		15	1	Y	*AGN,CNO
704	Type of Service		1	1	Y ^e	*AGN,TOS
705	Systems Identifier	SYS,SYA	24,32	1	Y	*SYS
707	USCINCPAC Complement/ FMSC Function Number		8	20	N	
710	Host Country Docket Number		12	10	N	
711	Aeronautical Service Range and Height		6	1	N	
715	Transmitter FMSC MRFL Number		6	1	N	
716	Usage Code		1	1	N	
ADDITIONAL INFORMATION						
801 ^f	Coordination Data/Remarks		60	20	N	
803	Requestor Data	POC	60	1	N	
804	Tuning Range/Tuning Increments		60	30	N	
805 ^f	Date Response Required		8	1	N	
806 ^f	Indication if Host Nominations are Acceptable		60	10	N	
807 ^f	Frequencies to be Deleted		60	10	N	
901	Record Status		1	1	N	
903	Proposal Status	CPS	4	20	N	
904	Status Date	STD	8	20	N	
905 ^g	Proposal Date Time Group		14	1	N	
906 ^g	Originator		66	1	N	
907	Validation Status		1	1	N	
910	Exercise Project		20	1	N	

TABLE A1 SUMMARY OF DATA ITEM SPECIFICATIONS

SFAF Data Item Number	Title	JSMSw Tags/ Spectrum XXI Tags	Maximum Input Lengths	Maximum Occurrences	To IRAC^a	GMF Tags
911 ^j	Date of Last Transaction	DAT	8	1	N	
922 ^j	Participant Code		6	20	N	
924	Data Source Indicator		4	1	N	
926 ^j	Semi-Bandwidth		6	1	N	
927 ^j	Date of Entry		8	1	N	
928 ^j	Date of Receipt		8	1	N	
950	PC ID	PCI	10	1	N	
952 ^j	IRAC Security Classification		1	1	Y	CLA
953 ^j	IRAC Declassification Date		10	1	Y	CDD
956	Agency Action Number	ACN	10	1	Y	ACN
957 ^j	Review Year	RYP	4	1	Y ^h	RYP
958 ^j	Routine Agenda Item	RTN	1	1	Y	RTN
959 ^j	Circuit Remarks	REM	40	30	N	REM
963	FCC File Number	FLN	13	1	Y ^h	*FLN
964 ^j	Tx Aircraft Altitude		3	10	N	XAD
965 ^j	Rx Aircraft Altitude		3	10	N	RAD

a Y = Yes, N = No, a number = the number of characters sent to NTIA (FAS of the IRAC).

b This data item is stored in the GMF Circuit Remarks. Circuit Remarks are limited to 30 occurrences.

c A special handling code in the second character of the security classification is sent to NTIA as FOI ~~X~~.

d Army and NSA only.

e Army only.

f Not stored in the FRRS central computer facility (CCF) database.

g For distributed computer facility (DCF) use only.

h Not used by DoD.

i Computer-generated by NTIA (IRAC).

j Computer-generated by JSC.

k A maximum of 30 receiver locations are allowed in a frequency assignment record. The number of occurrences in items 400 - 473 are related to the number of occurrences that are permitted at each receiver site. For example, only one item 400 is permitted at a site, while 10 equipment nomenclatures are permitted at any single receiver site. (In other items, the maximum number of occurrences relate to the number of occurrences permitted in a complete record.)

m If data sent to NTIA is different from the data entered, see SFAF data items 952 and 953.

n *USA is a GMF output field used in Canadian records.

ADMINISTRATIVE DATA

Administrative Data - Data items 005 through 007, 010, 020, and 102 through 108 provide data to initiate the processing of frequency assignments.

Security Classification 005

2,10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: FOI (for any Special Handling Code listed below), (CLA, CDD if the same as sent to NTIA.)

Description: Data Item 005 has two parts. Part one contains a 1- or 2-letter designator representing the security classification of the record and, if applicable, special handling instructions. The second part of the item contains a 10-character field containing the record declassification instructions. The record declassification instructions must always be entered if the first character of the security classification is a "C," "S," or "T."

Classification Codes - First Character

U - UNCLASSIFIED **C** - CONFIDENTIAL **S** - SECRET **T** - TOP SECRET

Special Handling Codes - Second Character

Special Handling Codes may be required in TOP SECRET, SECRET, or CONFIDENTIAL records to reflect the fact that if the classified data were removed from the record, the remaining UNCLASSIFIED data must still be protected in accordance with the applicable special handling code. Remember, this could apply in instances where SECRET or CONFIDENTIAL records are sent to NTIA as UNCLASSIFIED records for inclusion in the GMF automated database.

- B** - Releasable to soil country and the North Atlantic Treaty Organization (NATO); otherwise, not releasable outside the US Government in accordance with (IAW) Section 552 (b)(1) of Title 5 of the US Code.
- E** - Not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- F** - Not releasable to foreign nationals and not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- H** - Releasable to soil country only; otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.

- J** - Contingency Assignment - The record contains unified commander comments only; not releasable to foreign nationals unless formally coordinated; otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code
- K** - Permanent assignment. Available for contingency use within the theater after coordination with and approval of the cognizant unified commander - releasable to soil nation; otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- N** - Releasable to NATO; otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- P** - Proprietary; otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.

The following special handling codes are used within TOP SECRET stand-alone databases and are not to be used within the FRRS worldwide SIPRNET database system:

- L** - Sensitive Compartmented Information (SCI); otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- Q** - Special Category (SPECAT); otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.
- R** - Special Access Required (SAR); otherwise, not releasable outside the US Government IAW Section 552 (b)(1) of Title 5 of the US Code.

Declassification Instructions

For TOP SECRET, SECRET, or CONFIDENTIAL records, follow the security classification with a comma, and the appropriate declassification instruction, using one of the following formats:

- DEYYYYMMDD** - Declassify on: Enter **DE** followed by the year (YYYY), the month (MM) and the day of the month (DD). If the declassification date set at the time of the original classification action is to be extended beyond 10 years, a data entry is required in Data Item 014.
- DEOADR** - Declassify on: Originating Agency Determination Required. If DEOADR is used in a record, an entry is required in Data Item 014.

Examples:

005. UE

005. CB,DE20051130

005. SE,DEOADR

DEXnnnnnnnn - Declassify on: Exempt from automatic declassification. The letters **nnnnnnnn** indicate one or more reasons (see list below) why TOP SECRET, SECRET, and CONFIDENTIAL records cannot be automatically declassified. Enter **DEX** followed by one to seven numbers, in numerical order, applicable to the appropriate reason(s) listed below.

- 1- Reveal an intelligence source, method, or activity, or a cryptologic system or activity.
- 2- Reveal information that would assist in the development or use of weapons of mass destruction.
- 3- Reveal information that would impair the development or use of technology within a US weapons system.
- 4- Reveal US military plans or national security emergency preparedness plans.
- 5- Reveal foreign government information.
- 6- Damage relations between the US and a foreign government, reveal a CONFIDENTIAL source, or seriously undermine diplomatic activities that are reasonably expected to be ongoing for a period greater than ten years.
- 7- Impair the ability of responsible US government officials to protect the president, the vice president, and other individuals for whom protection services, in the interest of national security, are authorized.
- 8- Violate a statute, treaty or international agreement

Examples:

005. SH,DEX1 (one reason for exemption from automatic declassification)

005. CJ,DEX134 (three reasons for exemption from automatic declassification)

DE25Xn - Declassify on: Permanently valuable information (as defined by the national archivist) is exempt from automatic declassification 25 years beyond the original classification date. (The letter **n** indicates why a TOP SECRET, SECRET, or CONFIDENTIAL record cannot be automatically declassified 25 years after the original classification date.) Enter **DE25X** followed by a number **n** from the applicable paragraph below. Note: When the value of **n** is greater than **1**, an entry is required in Data Item 016.

- 1- Reveal the identity of a CONFIDENTIAL human source, or reveal information about the application of an intelligence source or method, or reveal the identity of a human intelligence source when the unauthorized disclosure of that source would clearly and demonstrably damage the national security interests of the US.
- 2- Reveal information that would assist in the development or use of weapons of mass destruction.
- 3- Reveal information that would impair US cryptologic systems or activities.
- 4- Reveal information that would impair the application of state-of-the-art technology within a US weapon system.
- 5- Reveal actual US military war plans that remain in effect.
- 6- Reveal information that would seriously and demonstrably impair relations between the US and a foreign government, or seriously and demonstrably undermine ongoing diplomatic activities of the US.
- 7- Reveal information that would clearly and demonstrably impair the current ability of US Government officials to protect the president, vice president, and other officials for whom protection services, in the interest of national security, are authorized.
- 8- Reveal information that would seriously and demonstrably impair current national security emergency preparedness plans.
- 9- Reveal information that would violate a statute, treaty, or international agreement.

Example:

005. SH,DE25X5

Input Requirement: Data Item 005 is always required. Enter the overall security classification of the frequency proposal or assignment and the appropriate special handling code if required. (OUS&P requests must have a special handling code included in the security classification. When applicable, each UNCLASSIFIED frequency assignment must have a special handling code so it can be identified as a record that has been separated from a CONFIDENTIAL group defined in the *DoD Frequency Assignment Security Classification Guide*.¹⁾ As a security precaution, this data item cannot be deleted from a record and can only be changed by use of Data Item 006.

Security Classification Modification..... 006

2,10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: See Data Item 005.

Description: Data Item 006 specifies the **new** security classification and/or special handling code that is to be assigned to an existing record and/or a change to the declassification instructions.

Input Requirement: If the record's security classification, special handling code, or declassification instructions are to be changed, enter the new security classification data and make appropriate classification code changes to the data items that are affected. (Data Item 006 must always be preceded by Data Item 005 to show the record's **existing** security classification.)

Examples:

006. UE

006. CB,DEOADR

006. SB,DE19980715

Missing Data Indicator 007

1 character - 1 occurrence

Submitted to IRAC: yes GMF tag: MSD

Description: A Z in this data item indicates that SECRET data is missing from the automated record sent to NTIA. (The SECRET record is separately submitted to NTIA as a paper document).

Input Requirement: Not used by DoD. Non-DoD organizations enter the letter Z to indicate that this record would be classified SECRET if all data submitted to NTIA were provided.

Example:

007. Z

Type of Action..... 010

1 character - 1 occurrence

Submitted to IRAC: yes GMF tag: TYP

Description: Data Item 010 indicates the type of action required to process the frequency assignment transaction.

Input Requirement: Data Item 010 is always required and must contain one of the type of action codes described below.

A - Administrative Modification. This action is similar to a Modification (M) action; however, it is used to make three specific types of changes:

- (1) Changes due to typographical errors in the authorizing document
- (2) Changes in administrative data items (e.g., 200 series)
- (3) Mass changes required for compliance with international, national, or DoD rules and regulations.

The review date (Data Item 142) will not be automatically changed if a Administrative Modification action is used.

D - Delete. Used to remove an existing record from a database.

E - Expired. A computer-generated code used by NTIA to remove an expired record from the GMF and its matching record from the FRRS.

F - Notification. Used to notify the activation of a frequency for a particular station or stations under the authority of a group assignment. Data Item 105 must also be specified.

M - Modification. Used to add, substitute, or remove one or more data items in an existing record.

N - New. Used to create a new record and place it in the appropriate online database.

R - Renewal. Used to extend the expiration date of a temporary assignment. Other data may be changed as necessary.

Example:

010. M

Derivative Classification Authority 014

8,60* characters - 10 occurrences

Submitted to IRAC: yes GMF tag: *CLF

Description: This data item indicates the date, title, and publishing organization of the source document from which one or more TOP SECRET, SECRET, or CONFIDENTIAL data entries in the record were derived.

Input Requirement: This data entry is required when the DECLASSIFICATION INSTRUCTIONS in Data Item 005 contain ⚡DEOADR⚡ or when the classification of data is ⚡Derived From⚡ other sources such as security classification guides, J-12

documents, or operations plans. The data entry will be the source date (formatted YYYYMMDD (year-month-day)), a comma followed by the title and the publishing organization. (An entry in Data Item 018 is not required when Data Item 014 is used.) Whenever all of the multiple sources are entered, the most restrictive declassification instruction from all of the sources used must be entered in the second part of Data Item 005.

Examples:

014. 19930815, B-1B SCG, OC-ALC/LAB (a single example)
 014. 19921122, OPLAN 2104, CINCPAC (a two document example)
 014/2. 19870614, J-12 5502/4, USAFFMA

When the original classification authority extends a declassification date in Data Item 005 beyond the initial ten-year period, this field may be used to identify the date the declassification date was extended, the individual, and individual's agency or organization that approved the extension. This entry is not necessary when the classification is derived from another source, and the source is identified in accordance with the subparagraph above.

Example:

014. 20051105, CDR CINCPAC

* Data in records where SFAF Data Item 144 equals "Y" cannot exceed 35 characters until NTIA lengthens the GMF field.

Unclassified Data Fields 015

72* characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *CLU

Description: This data item alerts the reader of a printed or automated displayed record that there are instances when UNCLASSIFIED data entries are not preceded by the entry (U) in a CONFIDENTIAL, SECRET, or TOP SECRET assignment.

Input Requirement: This data item is required for all classified records. Note, even though all data entries in a record are classified, there are UNCLASSIFIED data entries, computer-generated by the JSC.

Example A: (for use in CONFIDENTIAL and SECRET FRRS records)

015. DATA ENTRIES NOT PRECEDED WITH (C) OR (S) ARE UNCLASSIFIED

Example B: (for use only in TOP SECRET stand-alone operations)

015. DATA ENTRIES NOT PRECEDED WITH (C), (S) OR (T) ARE UNCLASSIFIED

* Data in records where SFAF Data Item 144 equals "Y" cannot exceed 35 characters until NTIA lengthens the GMF field. The current GMF data entry


is automatically converted from the above SFAF data entry to the standard GMF entry: REMnn ALL DATA FIELDS NOT LISTED IN *CLD

Extended Declassification Date 016

35 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *CDE

Description: Data Item 016 contains a declassification date (in the format YYYYMMDD) that is beyond 25 years from the date of original classification.

Input Requirement: Data Item 016 is required when Data Item 005 contains DE25Xn, where the value of  is greater than 1.

Example:

016. 20351231

(for Dec 31, 2035)

In rare instances, a textual entry may be present.

Downgrading Instructions 017

1,8 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *AGN,DNG-

Description: This data entry is a two-part field. The entry contains the new classification level (“C” for Confidential or “S” for Secret), followed by a comma and the date (YYYYMMDD) the record is to be downgraded from SECRET to CONFIDENTIAL or downgraded from TOP SECRET to either SECRET or CONFIDENTIAL.

Input Requirement: Data Item 017 is required whenever there are downgrading instructions contained in the source from which the classified data in the record was derived.

Example:

017. C,19991105

Original Classification Authority 018

60* characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *CLA

Description: This data item indicates the title and organization of the individual who determined the original classification of the classified data in the assignment record.

Input Requirement: Required when classification information is **not** derived from another document such as a classification guide, J-12 paper, or operations plan (see Data Item 014). Enter the title and organization of the original classification authority.

Examples:

018. CDR,AMC

018. CDR,AFMC

018. CDR,7FLT

If the identification of the original classification authority reveals additional classified information, an entry of 018. EXCLUDED, 1.7.B is permitted.

* Data in records where SFAF Data Item 144 equals "Y" cannot exceed 35 characters until NTIA lengthens the GMF field.

Reason for Classification 019

35 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *CLR

Description: This data item contains a coded data entry indicating the reasons the original classification authority determined that the data in this assignment was classified.

Input Requirement Required when classification information is **not** derived from another document such as classification guides, J-12 documents, or operations plans. Enter the reason for the classification from the list provided below. The data entry will be **1.5** followed by one or more letters in alphabetical order applicable to the appropriate paragraphs below.

A - Military plans, weapons systems, or operations

B - Foreign government information

C - Intelligence activities (including special activities), intelligence sources or methods, or cryptology

D - Foreign relations or foreign activities of the US, including confidential sources

E - Scientific, technological, or economic matters relating to the national security

F - US Government programs for safeguarding nuclear materials or facilities

G - Vulnerabilities or capabilities of systems, installations, projects or plans relating to national security.

Examples:

019. 1.5A
019. 1.5EG

In rare instances, a textual entry may be present such as “FOREIGN RELATIONS.”

Example:

019. FOREIGN RELATIONS

Proposal References..... 020

64 characters - 10 occurrences²

Submitted to IRAC: no GMF tag: None

Description: Data Item 020 is the originating requester’s message date-time-group (DTG), E-mail or letter reference.

Input Requirement: (Optional). Enter the requester’s message DTG with a Plain Language Address Designator (PLAD) or other reference. This information will appear in FRRS transaction files only; it will not appear in the GMF or FRRS central databases.

Example:

020. NFCWUS 041325Z DEC 87

Agency Serial Number 102

10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: SER

Description: Data Item 102 is the primary FRRS record identifier. It is unique and cannot be changed.

Input Requirement: The agency serial number is required for all types of actions that will be entered into the FRRS central database. The serial number is formatted as AAAAYYNNNN. The agency abbreviation (identifier) for the assignment (as defined in the *NTIA Manual* or as listed below) is entered in characters 1-4 (AAAA). When AAAA is less than four characters, trailing spaces are required; the next two numbers (YY) identify the calendar year in which the assignment initially is processed; the following four numbers (NNNN) are specified to uniquely identify the assignment. The following are agency serial number identifiers for MILDEP/JFP frequency assignments:

IDENTIFIER	ORGANIZATION
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²This data item is reserved for use by MILDEP, CINC, and Agency frequency management offices or subordinate organizations when its use has been delegated to lower levels.

AF	Air Force	
AR	Army	
CEN	USCINCCENT	- Commander-in-Chief, Central
EUR	USCINCEUR	- Commander-in-Chief, Europe
J	DoD	
LA	CINCUSACOM	- Commander-in-Chief, Atlantic Command
N	Navy	
NS	NSA	
PAC	USCINCPAC	- Commander-in-Chief, Pacific
SOU	USCINCSO	- Commander-in-Chief, Southern Command

Example:

102. N 775163

Interdepartment Radio Advisory Committee Docket Number103

8 characters - 3 occurrences

Submitted to IRAC: no GMF tag: AUS

Description: Data Item 103 is a reference number assigned by the IRAC to frequency applications submitted to the FAS. Automated databases provide three IRAC docket numbers in the following order:

1. Docket number for current modification
2. Original docket number
3. Docket number for last modification or renewal.

Input Requirement: Data Item 103 is an NTIA computer-generated GMF output data item.

List Serial Number.....105

10 characters - 1 occurrence²

Submitted to IRAC: yes GMF tag: LSR

Description: Data Item 105 is the agency list serial number of a GMF record representing a group or area assignment. It brings into use, by a particular station or stations, a frequency authorized under a group assignment or authorized for communications with nongovernment stations.

Input Requirement: Only enter the List Serial Number of a GMF group or area assignment if a Notification (F) action is used.

Example:

105. N 765530

Serial Replaced, Delete Date 106

10,8 characters - 1 occurrence²

Submitted to IRAC: yes GMF tag: SRS, SEX

Description: A record may be deleted from the GMF using Data Item 106 while entering a New or Notification type of action. This is a two-part data item. The first part of the data item is the serial number of the GMF record being deleted and the second part of the data item is the date the record will be automatically deleted from the GMF. This data item is not stored in the database.

Input Requirement: If an existing GMF assignment record is to be deleted using a New action or a Notification action, enter the agency Serial Number of the existing assignment followed by the desired date of deletion as YYYYMMDD. If multiple records are to be deleted based on a single new assignment, **one** record can be deleted using the Serial Replaced, Delete Date data entry and the others can be deleted using separate Delete actions.

Example:

106. N 820512,19981005

Authorization Date..... 107

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: AUD

Description: The date (YYYYMMDD) on which a GMF assignment was originally authorized.

Input Requirement: This is an NTIA computer-generated GMF output data item only.

Example:

107. 19971105

Docket Numbers of Older Authorizations 108

35 characters - 30 occurrences²

Submitted to IRAC: yes NTIA tag: *DOC

Description: Data Item 108 provides a history of an assignment's previous GMF authorizations. It allows New or Notification type of actions to retain all previously assigned docket numbers, authorization dates, and agency serial numbers.

Input Requirement: This data item is optional. Enter up to 35 alphanumeric characters for Docket Numbers of Older Authorizations to be retained in a New action or a Notification action as applicable. Multiple docket entries are allowed within a 35-character line by separating them with a comma. Authorization dates and serial

numbers may also be entered along with the docket numbers within a 35-character line by separating them with commas.

Examples:

108.	I84729	- Docket only
108.	I73621,195704	- Docket and date
108.	I67543,195510,N 550142	- Docket, date, and serial number
108.	I89432,I6723419	- Two dockets
108.	I6943591,AF 690431	- Docket and serial number

EMISSION CHARACTERISTICS

Data items 110 through 118 contain the command process of designating a required frequency, and the relationship of the frequency with controlling factors such as station class, emission designators, and power.

Frequency(ies) 110

11 or 11-11 or 11(11) characters - 1 occurrence

Submitted to IRAC: yes GMF tag: FRQ or *FRB

Description: Data Item 110 is the frequency band or discrete frequency assigned to the unit and/or required for the equipment described in the assignment. A reference frequency, if included, is the assignment of a suppressed or reduced carrier sideband.

Input Requirement: This data item is always required. Enter the discrete frequency or frequency band assigned to the unit and/or required for the equipment described in the assignment. A reference frequency, if included in parenthesis, is the assignment of a suppressed or reduced carrier sideband. For a frequency band assignment, enter the lower frequency and the upper frequency (separated by a dash) with the frequency unit indicator preceding the lower frequency. An upper frequency range unit indicator is required if the units of the upper frequency range is different from the units of the lower frequency range, e.g. 110. K2000-M35. For certain operations, the assignment of a range of frequencies (frequency band) may be required in lieu of a specific operating frequency. These types of assignments shall only be requested when specific frequencies will not satisfy the requirements. Frequency band assignments are normally authorized for the following:

- a. Transmitters which automatically sweep through all frequencies in a band.
- b. Radiosonde transmitters operating in either of the bands: M400.15 - 406.0 or M1670 - 1700.
- c. Frequency-agile radar beacons (racon) operating in either of the bands: M2900 - 3100 or M9300 - 9500.

- d. Transmitters that use automatic frequency selection based on changing propagation conditions along the transmission path.
- e. Transmitters that automatically pause at 15 or more specific operating frequencies within a band.
- f. Operations that require the use of 15 or more specific operating frequencies within a band for Research, Development, Test and Evaluation (RDTE) purposes.
- g. Operations that involve a multitude of mobile radiolocation or radionavigation transmitters. Whenever possible, at the option of the applicant, operational frequencies may be recorded in Data Item 503.
- h. Tactical and/or training assignments (above 30 Megahertz (MHz)) that require the use of 15 or more specific operating frequencies within a band.
- i. Operations devoted exclusively to Electronic Warfare (EW), Electronic Countermeasures (ECM), and/or Electronic Counter-Countermeasures (ECCM). For sideband operations, enter the reference frequency in parentheses after the assigned frequency.

Precede the frequency value with unit indicators as follows:

- K** - if frequency is less than 30 MHz
- M** - if frequency is at least 30 MHz, but less than 100 GHz
- G** - if frequency is at least 100 GHz, but less than 3 THz
- T** - if frequency is 3 THz or greater.

Insert a decimal point only if there is a significant digit to the right of the decimal point.

Examples:

- 110. K17034
- 110. K6737.5(6736)
- 110. K2000-M30

For frequency band(s) that are to be excluded from a given frequency band, enter the excluded bands in Data Item 111.

Example:

- 110. M13250-15700
- 111. M14770-14930

Special Consideration for Processing Frequency Entries

Frequency(ies), frequency bands, or reference frequencies listed in FRRS records cannot be changed. Frequency data is required (as part of a computer triple check of frequency (Data Item 110), record security classification (Data Item 005), and record serial number (Data Item 102)) to ensure that the correct record is being modified. Failure to enter the complete frequency, upper frequency limit, or reference frequency (Data Item 110) when using a Modification action is a frequent mistake that is overlooked during computer processing; **however, mistakes made in entering the security classification of Data Item 110 are not overlooked during computer processing.** The security classification of Data Item 110 is processed the same way as a data item being modified using a Modification action. For example, a modification input of **110. M9345** would change a record containing **110. (C) M9345-9465** to read **110. M9345-9465**. In this example, the frequency data (M9345-9465) remained unchanged, but the classification of the frequency data was **declassified from (C) to (U)**.

Excluded Frequency Band 111

23 characters - 30 occurrences

Submitted to IRAC: yes GMF tag: *FBE

Description: Data Item 111 is used in conjunction with a frequency band assignment to designate portions of the band excluded from the assignment.

Requirement: If a portion of a frequency band entered in Data Item 110 is to be excluded, enter the frequency band(s) to be excluded (in ascending order). An upper frequency range unit indicator is required if the unit of the upper frequency range is different from the unit of the lower frequency range.

Example:

111. M960-1770

111/2. M2200-2400

Frequency Separation Criteria 112

35 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 112 identifies the required frequency separation between the different radio sets operated at one transmitter or receiver location.

Input Requirement: Data Item 112 is required for USCINCEUR assignments. It is optional for all others. Enter the required frequency separation (ⓈF), in MHz, between the different radio sets operated at one location.

0.5 MHZ - For a transmitter power below 24.8 dBW (300 watts), enter 0.5 MHZ

2 MHZ - For a transmitter power above 24.8 dBW (300 watts), enter 2 MHZ

2.0 - 9.9 MHZ - For an exceptionally high transmitter powers, enter values between 2.0 MHz and 9.9 MHz.

If radio sets have two or more power stages, enter the dBW value and °F for each power stage. Note: This data is required in order to avoid desensitizing the receivers if two or more UHF radio sets are operated at one location simultaneously, e.g., at a tower. This data also is required to establish the prerequisites for an interference-free radio communication.

If, in radio relay frequency requests, a minimum frequency separation between a number of transmitters or between a transmitter and a receiver must be observed, these separation frequencies are to be entered. Enter the value in MHz. Use the following abbreviations and separate them with slashes:

TX - Transmitter

RX - Receiver

Examples:

112. 0.5 MHZ

112. 2.0 MHZ

112. TX/TX40MHZ/TX/RX100MHZ

Station Class..... 113

4 characters - 20 occurrences

Submitted to IRAC: yes GMF tag: STC

Description: Data Item 113 identifies the functional use of the assigned frequency at a particular transmitting station. See Annex A to this appendix for a list of acceptable station class symbols and their definitions. The suffix *R* is included if a station is used primarily as a repeater and operates in the bands 29.89-50 (exclusive Government use), 138-144, 148-148.9, 150.05-150.8, 162-174, and 406.1-420 MHz.

Input Requirement: Enter one or more standard station class symbol(s). (Data items 113, 114, 115 and (116 for Europe only) are interrelated, and an entry in any of the three data items must be accompanied by a corresponding entry in the other data items.)

Example:

113. FX

113/2. FX

Emission Designator..... 114

11 characters - 20 occurrences

Submitted to IRAC: yes GMF tag: EMS

Description: Data Item 114 identifies the necessary bandwidth and emission classification symbols. The bandwidth can be determined by using formulas shown in the ITU Radio Regulations, CCIR Recommendations, or the NTIA Manual. Emission classification symbols consist of the three required symbols and the two optional symbols shown in Tables A-B-1 and A-B-2 in Annex B to this appendix.

Input Requirement: Enter one or more emission designator(s) containing the necessary bandwidth and the emission classification symbols. Enter the necessary bandwidth using the first four characters (three digits and a unit designator letter are required), with the unit designator in the position the decimal would normally occupy. Use:

- H** - If the value is less than 1000 Hz
- K** - 1 kHz to values less than 1000 kHz
- M** - 1 MHz to values less than 1000 MHz
- G** - 1 GHz or greater.

A doppler shift shall not be included in the frequency tolerance or bandwidth of emission; however, when a doppler shift is significant, it should be reported in Data Item 520.

Examples:

- a. For a frequency assignment with a single emission designator, enter :
114. 3K00J3E
- b. Similarly, for a frequency assignment with two emission designators, enter:

114. 1K24F1B
114/2. 3K00J7B
- c. If the same emission is to be used for two different station classes, enter the emissions twice:

114. 100H00F1B
114/2. 100H00F1B
- d. To enter multiple emission designators, enter them on subsequent lines as shown below:

114. 3K00J3E
114/2. 3K00J1D
114/3. 1K10F1B
114/4. 100H00A1A

114/5. 3K00J3E
114/6. 100H00A1A

- e. To change the third emission designator in a record containing three or more emissions, enter:

114/3. 1K24F1B

- f. If the third emission designator is to be deleted, the corresponding entries in data items 113/3 (Station Class) and 115/3 (Power), 116/3 (Power Type) must also be deleted. For example:

113/3. \$
114/3. \$
115/3. \$
116/3. \$

(For Europe only)

Transmitter Power..... 115

9 characters - 20 occurrences

Submitted to IRAC: yes GMF tag: PWR

Description: Data Item 115 identifies the maximum transmitter power output authorized to be used.

Input Requirement: Enter one or more power data entries. Enter (1) carrier power (pZ) for A3E sound broadcasting in the broadcasting service, (2) mean power (pY) for other amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions, and (3) peak envelope power (pX) for all emission designators other than those referred to in (1) and (2) above, including C3F television (video only). Express the power to a maximum of five decimal places and precede the entry with the unit designator as follows:

- W** - If power is less than 1000 watts
K - If power is at least 1 kW but less than 1000 kW
M - If power is at least 1 MW but less than 1000 MW
G - If power is 1 GW or greater.

Example:

115. W0.5
115/2. K1.5

Power Type 116

1 character - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 116 describes the power type code for either carrier, mean, or peak envelope power emitted. The power type code will depend on the type of emission of the transmitter equipment.

Input Requirements: Data Item 116 is required for USCINCEUR assignments. It is optional for all others. Enter the power type code as defined below. The number of occurrences should match the number of occurrences in Data Item 115. The types of power codes are listed below:

C - Carrier Power

Use this for "NON" and for "A3E" sound broadcasting service (Station Class "BC").

M - Mean Power

(For all A/A & A/G/A). Use this for most AM emissions using unkeyed full carrier and all frequency modulated emissions. Typical emissions include A2A, A2B, A3C, A3E, A3F, A7B, AXX, F1B, F1C, F2B, F3E, F3F, F7B, FXX, H2A, H3E, and H7B.

P - Peak Envelope Power

Use this for all pulsed equipment, C3F Television, and the following classes: A1A, A1B, A7B, B7B, B8C, B8E, BXX, C3F, G3E, J2B, J3E, J7B, JXX, K1B, K2B, K3E, K3F, L2B, M2B, M3E, PON, PXX, R2B and R3C.

Example:

116. P

116/2. P

Effective Radiated Power 117

6 characters - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: This is the power radiated from the transmitter antenna. It is the sum of the power supplied to the antenna and the gain of the antenna, expressed in dBm.

Input Requirements: Data Item 117 is filled in some Federal Communications Commission (FCC) and ITU records and is computer-generated by the JSC in other instances. The Effective Radiated Power (ERP) is entered in dBm.

Example:

117. 40

Power/ERP Augmentation 118

1 character - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: This is a coded data entry that is used to indicate when either Data Item 115 (Power) or Data Item 117 (ERP) is computer-generated.

Input Requirement: This is a JSC computer-generated output data item. One of the following codes was used:

- P** - power field (Data Item 115) computer-generated
- E** - ERP field (Data Item 117) computer-generated
- blank** - neither field was computer-generated

Example:
118. P

TIME/DATE INFORMATION

Data items in this section contain data related to implementation of the assignment, time period when frequency is to be used, expiration/review data, indicators for further processing, registration through international channels, and identifiers of trunk service and/or joint assignment use.

Time **130**
4 characters - 1 occurrence
Submitted to IRAC: yes GMF tag: TME

Description: Data Item 130 describes the period of time when the frequency will be either guarded (monitored) or used for transmission. The period indicated is not a limitation or a restriction, but rather the period when the frequency must be available to satisfy its operational requirement. The data entered shall indicate (1) whether the frequency is required occasionally or on a regular basis, and (2) whether it is required only during the normal workweek (between 0600 and 1800, Monday through Friday) or for additional periods of time.

Input Requirement: This data item is required on regular assignments using frequency bands 29.89-50, 138-144, 148-149.90, 150.05-150.80, 162-174, and 406.10-420 MHz, except those for experimental stations and those with IRAC Notes (Data Item 500) S321 and S322. For all other bands at 29890 kHz and above, this data item is required for assignments with US, USA, or USP in Data Item 300 (transmitter State/Country). Use the appropriate number as follows:

- 1** - Regular, not limited to workweek
- 2** - Regular, workweek
- 3** - Occasional, not limited to workweek

4 - Occasional, workweek.

For stations in the fixed service below 29890 kHz, the above number will be followed by one of the following symbols to indicate the time of availability on a daily basis:

HX - For stations operating intermittently throughout the 24-hour day or for circuits with no specific working hours

HN - Night service

HJ - Day service

H24 - Continuous 24-hour service

HT - For transition period service.

Examples:

130. 2

130. 1H24

Percent Time..... 131

2 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 131 describes the percentage of time the transmitter equipment is in use during the scheduled hours of operation.

Input Requirement: Data Item 131 is required for USCINCEUR Germany (GE) assignments. It is optional for all others. Enter the percentage of use during the scheduled hours of operation.

Example:

131. 50

Required Date..... 140

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 140 is the date a new assignment or modification to an assignment is to be operational. Note: This data item is not stored in the central database.

Input Requirement: Enter the year, month, and day (YYYYMMDD) the new assignment, or modification to an existing assignment, is required by the operating unit. For temporary or exercise proposals, enter the date frequencies will first be used.

Example:

140. 19990101

Expiration Date 141

8 Characters - 1 occurrence

Submitted to IRAC: yes GMF tag: EXD

Description: Data Item 141 is the date when a temporary assignment is to expire. Temporary assignments are not to exceed five years. This data item is blank when Data Item 142 contains data.

Input Requirement: If the assignment is for less than five years, enter the year, month, and day (YYYYMMDD) the requirement for use of the assignment will end. This data item is used in conjunction with Data Item 140 to specify the period of time an assignment will be used. For example, a proposal for an exercise or test from 7 September 1990 through 21 September 1990 would contain the entries **140. 19900907** and **141. 19900921**. Note: Assignments will be automatically canceled on their expiration date and deleted from the DoD central database. If an assignment is being changed from a temporary assignment to an assignment with a review date, then Data Item 141 must be deleted, i.e., **141. \$**.

Example:

141. 20020622

Review Date 142

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 142 is the date by which the assignment is to be reviewed according to the FRRS review program. If records are processed to IRAC, the review date will be regenerated based on the FAS meeting date plus five years for all assignments except AAG/MAG assignments for which ten years are added to the FAS meeting date.

Input Requirement: If Data Item 141 is blank or is being deleted, and if Data Item 142 is not entered by the assignor, Data Item 142 will be computer-generated by the JSC, based upon the data entered in Data Items 102, 143 and 958. Enter the year, month, and day (YYYYMMDD) if the desired review date is less than five years or less than 10 years if the record is a European Command (EUCOM), Aeronautical Advisory Group (AAG) or Military Advisory Group (MAG) assignment. (If Data Item 141 contains an expiration date, leave the review date blank.)

Example:

142. 20020331

Revision Date..... 143

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: RVD

Description: The date (YYYYMMDD) on which the GMF frequency assignment was initially approved or most recently revised.

Input Requirement: Data Item 143 is an NTIA computer-generated GMF output data item.

Example:

143. 19960131

Record Indicator..... 144

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 144 indicates whether or not the assignment is to be processed to IRAC for approval.

Input Requirement: The record indicator is required on all DoD transactions. Use the appropriate code listed below:

Y - Assignment record is to be processed through IRAC.

U - Assignment record is inside the US&P and is **not** to be processed through IRAC.

O - Assignment record is OUS&P and is **not** to be processed through IRAC.

N - An existing IRAC assignment contains Data Item **144. Y**, but this transaction is **not** to be processed through IRAC. The data being changed will not be stored in the GMF record.

Note: FRRS records that contain Data Item 144 equal to O or U **cannot** be changed to Data Item 144 equal to Y. A new transaction must be submitted.

Example:

144. Y

ITU BR Registration 145

1,20 characters - 1 occurrence²

Submitted to IRAC: no GMF tag: None

Description: Data Item 145 indicates the action taken, or to be taken, to register an assignment with the International Telecommunication Union (ITU) Radiocommunication Bureau (BR).

Input Requirement: Data Item 145 indicates the status of the assignment's registration with the ITU BR. Enter the appropriate indicator from the following list:

- R** - Notified and registered by BR
- U** - Notified to BR but negative decision
- I** - Registration with BR on an insistence basis
- O** - Not notified to BR
- P** - Pending notification to BR
- M** - Registered with BR but needs to be modified
- Y** - BR registration required.

If amplifying comments are to be included, enter a comma following the indicator and then the comments. If a registration date is to be included in the comments, enter the date (YYYYMMDD) first, followed by a comma and any other information.

Example:

145. R,19690527,2A

DCS Trunk ID 146

6 characters - 20 occurrences²

Submitted to IRAC: no GMF tag: None

Description: Data Item 146 is the Defense Communications System (DCS) trunk identifier assigned by DISA. See Chapter 66 of DISAC 310-65-1.

Input Requirement: Enter the DCS trunk identifier when assigned by DISA.

Example:

146. 45CS01

146/2. 45US02

Joint Agencies 147

4 characters - 20 occurrences²

Submitted to IRAC: yes GMF tag: *JNT

Description: Data Item 147 identifies a joint assignment used by two or more agencies.

Input Requirement: Data Item 147 is required when Data Item 200 equals JNTSVC. For a joint application, enter the appropriate abbreviation of the joint agencies. Use the abbreviations as shown in Annex G of the *NTIA Manual*. Enter the agency identified in Data Item 102 as the first joint agency. Enter H for unidentified agencies in non-IRAC assignments.

Example A:

147. AF (USAF and Federal Aviation Administration (FAA) joint assignment)

147/2. FAA

Example B:

147. H (Entry for an unidentified agency)

Coordination Indicator 151

1 character - 1 occurrence²

Submitted to IRAC: yes GMF tag: ICI

Description: Data Item 151 indicates whether the IRAC is to coordinate the application with the Canadian Government, the Mexican Government, or both. It is also used for EUCOM assignments coordinated with NATO or host nations, or both.

Input Requirement: For assignments near US borders, enter one of the following codes:

C - Coordinated with Canada

M - Coordinated with Mexico

B - Coordinated with both Canada and Mexico

For EUCOM and Atlantic Command (LANTCOM) assignments, enter one of the following codes:

M - Coordinated with NATO for inclusion in the Master Radio Frequency List (MRFL)

H - Coordinated with Host Nation

B - Coordinated with both NATO and Host Nation

Example:

151. C

The coordination indicator is also used to identify the US Government coordination channels for those Canadian assignments along the US/Canada border that have been included in the GMF for EMC analysis purposes:

D - Coordinated through NTIA with FAS member agencies

F - Coordinated through the FAA

- J** - Coordinated through the DoD's Joint Chiefs of Staff (JCS)
- U** - No indication of coordination.

Coordination Data 152

1,35 characters - 30 occurrences²

Submitted to IRAC: yes GMF tag: *CAN and/or *MEX

Description: Data Item 152 consists of comments previously coordinated by the FAS Secretary with Canada and/or Mexico. This is a two-part data item: the first part identifies the country and the second part identifies the comment from that country.

Input Requirement: For new assignments replacing existing assignments (serial replaced actions), enter comments as previously coordinated (by the FAS Secretary) with Canada (C) or Mexico (M). Comments for other new assignments will be entered by the NTIA FAS Secretary when coordination comments are received from Canada or Mexico.

Example:

152. M,780029, NAIA	- (Record with comments received from
152/2. C,750361, NO MOBILE USE	Mexico and Canada)
152/3. C,WITHIN 40 MI RAD OF	
152/4. C,BURNABY BC	

United States comment data added by NTIA staff to Canadian or Mexican coordinated records (as REMnn *USA,) that are contained in the GMF will be formatted in SFAF Data Item 152 as follows:

Example:

152. U,NHIA, NOTING USE OF M163.4375, U.S.
 152/2. U,NHIA, SERIAL I8701234, DETROIT, MI

ORGANIZATIONAL INFORMATION

Data items 200 through 209 serve two major purposes: (1) As applicable, they identify the frequency management chain responsible for managing the assignment and the organizations having an area interest in the assignment area, and (2) they are also used for the selection and distribution of records. These data items are especially important when assignments are needed promptly to meet mission requirements.

Each frequency assignment has a management chain, from the service headquarters or CINC down to the operating unit. If logically and consistently entered into the records, the data concerning the organizations in the frequency management chain can be used to select and sort records in the manner most efficient for use by each management level in the chain. Data Item 200 (Agency) and Data Item 207 (Operating Unit) should always be filled in. There may be occasions when members of the management chain

are entered in more than one data item. For example, ACC (the command listed in Data Item 204) could be the operator of a net at Langley AFB. In this case, Langley (the base FMO listed in Data Item 206) could have ACC as an operating unit (Data Item 207). Consistency is the key factor in making these data items work for the good of the system. Each organizational level, from the top down, to and including operating units, must enter its data the same way each time. Although some higher level data entries are standardized by the service or CINC, at the operating unit level they are frequently not standardized. Therefore, all frequency management levels should ensure the consistency of the data being entered by those elements subordinate to them. Where organizational data content has not been specified by a higher authority, operating units can develop their own, but they **must** be consistent when making data entries in subsequent transactions. Previous variations in organizational data are being "cleaned up" and a periodic review system has been established to maintain data item consistency.

To make this system work, each agency, CINC, and area frequency coordinator (AFC) should look at its subordinate frequency management structure and decide which frequency management elements will be reflected at which level. In most cases, it is clear; however, there will be situations where it is not clear to the level concerned. For example, in Europe, should the NCTAMSMED entry be entered in data items 203, 204 or 205? Careful, thorough planning and execution should yield a database that can, with a high degree of certainty, provide the proper records via automated data distribution for each FRRS participant

Some organizations having frequency management responsibility may not need all the organizational data items listed. However, those data items used should be entered consistently. For example, if 8AF was also entered as 8F or 8 AF, then all the records for the 8AF would not be grouped together. To reduce this type of problem, the elimination of spaces is required.

Agency..... 200

6 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 200 identifies the agency responsible for managing the frequency assignment. Within the DoD this is normally USA, USN, USAF, or NSA. If an assignment is in joint use by two or more agencies, then both Data Items 147 and 200 must be completed. The responsible DoD agency will be entered as the first data entry in Data Item 147 followed by the other joint agencies. For example, an assignment between USAF and NASA would be entered as **147. USAF, 147/2. NASA and 200. JNTSVC.**

Input Requirement: Enter one of the following service or agency abbreviations as appropriate: USA, USN, USAF, NSA, or JNTSVC. If JNTSVC is entered, Data Item 147 must be completed.

Example:
200. USA

Unified Command..... 201

8 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 201 identifies the unified command (CINCPAC, CINCEUR, CINCSO, CINCCENT, JFMOLANT) or designated representative for the area in which the assignment will be used.

Input Requirement: This data item is required for all assignments where either the transmitter or a receiver is located OUS&P.

Example A:
201. CINCPAC

Example B:
201. CINCEUR
201/2. CINCSO

Unified Command Service..... 202

8 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 202 identifies the service-level organization within the unified command area that is responsible for managing the assignment. Within the CONUS, Data Item 202 identifies the Air Force or Army MAJCOM host responsible for the installation listed in Data Item 206.

Input Requirement: Enter the Major Command (MAJCOM) or Specified/Unified Command that has operational control of the installation or region of the world where the transmitter is located (this is not necessarily the Command that has operational control of the assignment). Within the CONUS, Air Force and Army organizations, enter the MAJCOM of the host installation.

Examples:
202. PACAF
202. FORSCOM

Bureau 203

4 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: BUR

Description: Data Item 203 identifies the Bureau to be included in the record.

Input Requirement: Data item 203 is required for Army assignments within the US&P and for all United States Marine Corps (USMC) assignments worldwide.

Examples:

203. PA	(An Army assignment in the CINCPAC area)
203. USMC	(A Marine Corps assignment)

Command..... 204

18 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 204 identifies the Major Command or other applicable organization frequency management level that is subordinate to the responsible agency identified in Data Item 200.

Input Requirement: This data item is required in all assignments. Enter the major command or other applicable organization.

Examples:

204. ACC
204. TRADOC

Subcommand..... 205

18 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 205 indicates the frequency management level between the command (Data Item 204) and the installation frequency manager (Data Item 206), or a level of command below the organization entered in Data Item 204.

Input Requirement: Enter the frequency management level between the command and installation frequency manager.

Example:

205. 5AF

Installation Frequency Manager..... 206

18 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 206 normally indicates the station, base, installation, or fort-level frequency management office responsible for the location of the operating unit.

Input Requirement: Enter the installation frequency manager when it exists.

Examples:

206. ANDREWS
206. BRAGG
206. NASPAXRV

Operating Unit 207

18 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 207 indicates the name or designation of the organization using the frequency assignment.

Input Requirement: This data item is required. Enter the short name or designation of the organization using the frequency assignment. For CINCPACFLT: Enter ACFT and/or SHIPS when Data Item 300 equals PAC, LANT, INDO, etc.

Examples:

207. 602TCW
207. SUBRON18
207. 517ARTY

User Net/Code..... 208

6 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: NET (Only the first five characters of the first data entry)

Description: Data Item 208 is a unique code that identifies the specific user of the frequency, i.e., the command, activity, unit, project, etc.

Input Requirement: Enter codes as directed by the responsible agency, as follows:

Army: Enter one Net Control Code.

Navy: Enter the one Unit Identification Code (UIC) of either the operating unit identified in Data Item 207 or in Data Item 302.

Air Force: Enter a standard use code as directed by Air Force Frequency Management Agency.

Examples:

208. N53618
208. ACEUS

Area AFC/DoD AFC/Other Organizations..... 209

18 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 209 identifies the DoD AFC, CINC, Service Area Frequency Management Office, or other organization not provided in data items 200-208.

Input Requirement: This data item is optional. Enter the DoD AFC, CINC, Service Area Frequency Management Office or other organization not provided in data items 200-208. The following standard entries are used for DoD AFCs:

AFCA	- DoD AFC Arizona
WSMR	- DoD AFC White Sands Missile Range
GAFC	- DoD Gulf AFC
EAFC	- DoD Eastern Space and Missile Test Center at Cape Canaveral, FL
AFCPR	- DoD AFC Puerto Rico
NAFC	- DoD AFC Nellis
WAFC	- DoD AFC Western Space and Missile Test Center
USAKA	- DoD AFC Kwajalein

If Data Item 300 equals US, USA, or USP, enter only the following DoD AFC codes respectively:

AFCUS	- Area Frequency Coordinator United States
AFCUSA	- Area Frequency Coordinator United States of America
AFCUSP	- Area Frequency Coordinator United States and Possessions

Example:
209. JJPN

TRANSMITTER LOCATION DATA

Transmitter data items 300 through 306 include all technical information pertaining to a single transmitter location. Only one transmitter location is allowed per assignment record.

State/Country 300

4 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: XSC

Description: Data Item 300 is an authorized abbreviation for the state, country, or geographical area in which the transmitting station is located. This data item cannot be changed in an FRRS record containing 144. Y.

Input Requirement: This data item is required. Enter the name or standardized abbreviation (as listed in Annex C to this appendix) of the state, country, or area in which the transmitting antenna is located.

Examples:

300. IN
300. LANT
300. SPCE

Antenna Location 301

24 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: XAL

Description: Data Item 301 is the name of the city, base, or geographical area of operation within which the transmitting antenna is actually located.

Input Requirement: This data item is required. Enter the name of the city, base, or geographical area where the transmitter antenna is located. Abbreviate the data entry if necessary; however, if an abbreviation is not required, the entry should be spelled the same as that in the US postal zip code directory or applicable gazetteer. After being entered the first time, all future entries for that same location should be spelled the same. If the transmitter antenna location is the same as the entry in Data Item 300, the antenna location should be abbreviated using the same abbreviation as that entered in Data Item 300. In addition to the above, the following will apply:

a. The following standard abbreviations will be used even if the entry is less than 24 characters:

Abbreviation	Location Word
ARPT	Airport
ARA	Army Area
CP	Camp
CY	City
CGD	Coast Guard District
CO	County
DI	District
DIV	Division
FT	Fort
IAP	International Airport
IS	Island(s)
LNB	Large Navigational Buoy
MT	Mont, Monte, Mount(s)
MTN	Mountain(s)

MAP	Municipal Airport
PG	Proving Ground(s)
PT	Point
ST	Saint

b. If the location name exceeds 24 characters after applying the standard abbreviation(s) listed in Table 1 above and the entry has not been previously used, then shorten the entry to 24 characters and enter the full text in Data Item 801 for review by the assignment authority.

If an area of operation is selected, it may be described as a radius, in kilometers, extending from a given location. For example, if an assignment is for transmission anywhere within a 50-kilometer radius of Dallas, then insert DALLAS in this data item and the radius in Data Item 306 (Authorized Radius). An area of operation may also be described by geographical coordinates. For example, if an assignment is for one or more land mobile stations operating south of 33 degrees north in the state of Arizona, then insert AZ in this data item and the coordinate data in Data Item 530 (Authorized Areas).

An area of operation within several states may also be described in this data item as US or USA, with the included or excluded states being shown in Data Item 531 (Authorized States). Similarly, US&P may be used if the area includes a possession. For locations described as an area of operation, note that operations might not occur in every square mile of the area selected and the area described might overlap into states not shown in Data Item 300 (State/Country).

Although the data inserted shall normally be geographical names or descriptions, exceptions may be made for experimental operations, mobile operations where the state/country and antenna location data items are identical (such as 300. PAC, 301. PAC, etc.), and/or space operations. For an assignment to an experimental station, other than one in space, or to a mobile station having identical state/country and antenna location names, words such as AIRCRAFT, BALLOONS, or SHIPS may be used, as appropriate. For an assignment to a station aboard a geostationary satellite, insert GEOSTATIONARY. For an assignment to a station aboard a nongeostationary satellite, insert NONGEOSTATIONARY. For an assignment to a station located on a natural object in space, insert the name of the object, e.g., MOON.

Examples:

301. FT BRAGG
301. NASHVILLE
301. NONGEOSTATIONARY

Station Control 302

18 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: XRC (only the first eight characters)

Description: Data Item 302 is used to identify the operating unit that controls, either electrically or administratively, the transmitting station when it is different from the data entered in Data Item 207. This data item is not used by Air Force.

Input Requirement: This data item is optional. Enter the operating unit or department that controls, either administratively or electrically, the transmitter station if it is different from the transmitter station in Data Item 207.

Example:

302. PWC

Antenna Coordinates 303

15 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: XLA, XLG

Description: Data Item 303 is the World Geodetic System 1984 (WGS 84) datum latitude and longitude (expressed in degrees, minutes, and seconds) of the transmitter antenna location entered in Data Item 301.

Input Requirement: This data item is required except when the site named in Data Item 301 is an area of operation for which coordinates cannot be applied or for nongeostationary satellites. Enter geographical coordinates (degrees, minutes, and seconds) for the antenna location. If the seconds are not known, insert 00 for the seconds, except in the case of navigation aid system (NAVAIDS), geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees latitude require two digits; degrees longitude require three digits. Enter N or S for latitude and E or W for longitude. If *GEOSTATIONARY* has been entered in Data Item 301, enter the latitude as 000000N and the longitudinal position of the satellite (in degrees, minutes, and seconds east or west). Note, when older maps are used, the coordinates may vary as much as 300-400 meters from locations determined by using DoD standard WGS 84 datum maps or Global Positioning System (GPS) equipment. Organizations are encouraged to obtain GPS equipment to determine the position of fixed antennas.

Examples:

303. 214216N1171039W (Coordinates for a fixed location)

303. 000000N1750000E (Coordinates for a geostationary satellite)

Call Sign 304

10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: XCL (only the first 8 characters)

Description: Data Item 304 is the international call sign assigned to the transmitting station. For navigational aids, this data item is used for the NAVAIDS identifier instead of a call sign.

Input Requirement: Data Item 304 is used to assign the international call sign to the transmitting station. Leave this data item blank if the call sign is either a local voice or tactical call sign, or if it is not applicable. For navigational aids, enter the NAVAIDS identifier.

Examples:

304. WUH55

304. AVV

Authorized Radius..... 306

5 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *RAD

Description: Data Item 306 defines the area of operation for a portable, mobile, or transportable transmitter station. This area is expressed as a radius in kilometers extending from the geographical coordinates listed in Data Item 303.

Input Requirement: If the station is portable, mobile, and/or transportable, and a circular area is used to describe the area of operation, enter a radius (in kilometers) from the coordinates listed in Data Item 303 to describe the area in which the transmitter station will operate. Add the suffix T to the entry if the radius applies only to the transmitter station, or B if the radius applies to both the transmitter and receiver stations (Note: When both fixed and mobile stations are to transmit on the same frequency, leave this data item blank and enter the radius of the mobile station in Data Item 406).

Examples:

306. 30T (Indicates a 30-kilometer radius of operation for the transmitter)

306. 150B (Indicates a 150-kilometer radius of operation for both transmitter and receiver stations)

SPACE STATIONS

Data items 315 through 321 are to be used for transmitter space-station data. Leave data items 315 through 319 blank for geostationary satellites.

Equatorial Inclination Angle..... 315

4 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *ORB preceding IN

Description: Data Item 315 indicates the angle at which the transmitting NONGEOSTATIONARY satellite's orbit crosses the equator. A nongeostationary satellite is defined as one whose circular orbit does not lie in the plane of the earth's equator and has a specific equatorial inclination, apogee, and perigee.

Input Requirement: Enter an equatorial inclination angle (in degrees), using a decimal point for fractional degrees for nongeostationary space transmitter stations.

Example:
315. 34.7

Apogee 316

5 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *ORB preceding AP

Description: Data Item 316 indicates the point in the orbit of a NONGEOSTATIONARY satellite at which it is farthest from the earth.

Input Requirement: Enter apogee (in kilometers) for nongeostationary space transmitter stations.

Example:
316. 23500

Perigee 317

5 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *ORB preceding PE

Description: Data Item 317 indicates the point in the orbit of a NONGEOSTATIONARY satellite at which it is nearest to earth.

Input Requirement: Enter perigee (in kilometers) for nongeostationary space transmitter stations.

Example:
317. 200

Period of Orbit 318

(7 characters - 1 occurrence)

Submitted to IRAC: yes GMF tag: *ORB

Description: Data Item 318 indicates the time it takes for a NONGEOSTATIONARY transmitter satellite to make one complete orbit.

Input Requirement: Enter the period of orbit for nongeostationary space transmitter stations. If the period of orbit is less than 24 hours, enter the time in hours followed by the letter H. If it is 24 hours or more, enter the number of days, followed by the letter D. Enter the data, using a decimal point for a fractional unit.

Example:
318. 19.6H

Number of Satellites..... 319

2 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *ORB receding NR

Description: Data Item 319 indicates the number of NONGEOSTATIONARY satellite transmitters in a system having similar orbital characteristics.

Input Requirement: Enter the number of nongeostationary satellites in the system.

Example:
319. 1

Power Density..... 321

4 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: SPD

Description: Data Item 321 indicates the maximum power density, per hertz (in dBW), supplied to an earth or space station's antenna or to those of terrestrial stations (including experimental) employing earth or space-station techniques. For frequencies below 15 GHz, the power shall be averaged over the worst 4 kHz band; for frequencies 15 GHz and above, the power shall be averaged over the worst 1 MHz band. The worst 4 kHz and 1 MHz bands are defined as those having the highest power density within the assigned emission bandwidth.

Input Requirement: For earth, space, or terrestrial stations (including experimental stations) employing earth or space-station techniques, insert the maximum power density per Hz (in dBW) supplied to the antenna. For negative values, insert a minus sign (-) before the value.

Example:
321. 8

TRANSMITTER EQUIPMENT

Data items 340 through 349 are used for the Transmitter Equipment. When both fixed and mobile stations (FA/MA, FB/ML, etc.) are used, enter the fixed transmitter data first.

Equipment Nomenclature..... 340

1,18 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: *EQT

Description: Data Item 340 has two parts. The first part identifies the type of equipment (government, commercial, or unassigned) and the second part identifies either the standard military nomenclature or the commercial make and model number of the equipment at each specific transmitter station location. If both a military nomenclature and a commercial model number are assigned to the same equipment, the military nomenclature will be used.

Input Requirement: This data item is required. Enter the equipment type code followed by the equipment system or component nomenclature for the transmitter location. (If available, the system nomenclature is preferred rather than the component nomenclature; however, either is acceptable. Data items 340 and 343 are interrelated, and an entry in Data Item 340 should be accompanied by a corresponding entry in Data Item 343, if known.) Enter one of the following equipment type codes:

G - Government nomenclature

C - Commercial model number

U - Unassigned nomenclature

After the equipment type code, enter a comma and then the nomenclature subject to the following:

a. For a government equipment nomenclature, enter the standard military nomenclature.

Examples:

340. G,AN/GRC-103 (A system nomenclature)

340. G,T128 (A transmitter component nomenclature)

b. If only a commercial model number is available, indicate the manufacturer of the equipment, using the manufacturer's code listed in Annex D to this appendix, followed by the model number. If no manufacturer code exists or is unknown, enter the full name of the manufacturer in Data Item 801.

Example:

340. C,MOTH23FFN1130E (A commercial handie-talkie manufactured by Motorola, model number H23FNN1130E. A partial nomenclature such as MOTH23 is incomplete since it applies to several different models of Motorola handie-talkies. The manufacturer's name and the complete model number should be

obtained from data plates on equipment whenever possible)

c. If the nomenclature includes a modification, insert MOD and a number, if applicable, immediately following the nomenclature. For the word MARK, insert MK immediately following the nomenclature.

Example:

340. G,T238MK1

d. If the transmitter does not have an assigned government nomenclature or commercial model number, enter the manufacturer's name and a brief description of the equipment listed in Data Item 801.

Example:

801. COLLINS RADIO EXPERIMENTAL

801. RADAR

Number of Stations, System Name..... 341

5,29 characters - 3 occurrences

Submitted to IRAC: yes GMF tag: *NRM

Description: Data Item 341 is a two part data item. The first part identifies the number of transportable, land-mobile and portable-type stations associated with the assignment and the second part identifies the name of the system involved. A station is one or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment necessary at one location for carrying on a radio communication service. A system is considered two or more equipment having a common property, usually geographic, administrative, functional, or operational in nature.

Input Requirement: In the 30-50, 138-144, 148-149.9, 150.05-150.8, 162-174, and 406.1-420 MHz bands, enter the number of land mobile stations, ship stations, and transportable stations associated with the assignment (if desired this data may be entered on assignments in other bands or for aircraft stations). The number entered shall represent either the exact number of stations or a range of numbers as follows:

Number of Stations	Enter
1-10	10
11-30	30
31-100	100
101-300	300
301-1000	1000

1001-3000	3000
3001-10000	10000
Above 10000	Nearest 10000

If the exact number is to be recorded, and it is 10, 30, 100, 300, 1000, 3000, or a multiple of 10000, add one to the number to distinguish it from a figure that represents a range of numbers. System names shall be determined by the applicant and must not be longer than 18 characters. The word NET (or letter N) may be used as the system name.

Example:

341. 1001,NET

Also, you may enter N if the assignment represents an entire system; enter S for all other cases. To enter a system name only, enter XXXXX, a comma, and the system name (see the last Example).

Examples:

341. 31,N

341. XXXXX,RANGE COORDINATION

TX Aircraft Nautical Mile Value 342

4 characters - 1 occurrence

Submitted to IRAC: no GMF tag: *RAD

Description: Data Item 342 contains the transmitter radius of aeronautical assignment group frequency area of operation in nautical miles and is computer-generated from Data Item 306.

Input Requirement: This is an NTIA computer-generated output data item.

Example:

342. 26

Equipment Allocation Number 343

7 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: *AGN,JFAn-

(n = the occurrence number in older records where there is more than one entry.)

Description: Data Item 343 indicates the allocation number assigned to the transmitter equipment or system by the J/F-12 Working Group.

Input Requirement: Enter the equipment J-12 allocation number (DD Form 1494) if known. Include a slash (/) and the revision number when appropriate. (Data items

340 and 343 are interrelated, and an entry in Data Item 343 must be accompanied by a corresponding entry in Data Item 340.)

Examples:

343. 1269

343. 337/2

Off-the-Shelf Equipment 344

6 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: *EQS

Description: Data Item 344 may be used in frequency bands 29.89-50.00, 150.8-174.0, 406.1-420.0 and 450-512 MHz for Land Mobile System (LMS) assignments. This data item may also be used in frequency bands 108.000-117.975 and 328.6-335.4 MHz for the following types of assignments: VOR1A, VOR1B, VOR2A, VOR2B, ILSLOC, or ILSGS.

Input Requirement: This data item is not used by DoD. Enter one of the following codes: LMS, VOR1A, VOR1B, VOR2A, VOR2B, ILSLOC, or ILSGS. This data item is not stored in the FRRS central database.

Example:

344. VOR1A

Radar Tunability 345

2 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *EQT

Description: Data Item 345 is a coded entry describing the tuning capabilities of both pulsed and nonpulsed radars.

Input Requirement: For all radars, enter one of the following symbols:

FA - Frequency-agile radars that operate on various frequencies within a band, either specified or random mode

FV - Radars that operate on a discrete frequency determined by the characteristics of a fixed magnetron or similar radio frequency generating device

FX - Radars capable of operating on a single discrete frequency

TC - Radars capable of being tuned to any frequency within the requested band

TS - Radars capable of being tuned across the authorized or requested band in discrete steps or increments. This includes crystal control.

Example:
345. TC

Pulse Duration 346

9 or 9-9 characters - 30 occurrences

Submitted to IRAC: yes GMF tag: *EQT following PD

Description: Data Item 346 indicates the width of the transmitted pulse (measured in microseconds or milliseconds at the half-power (3 dB) points) for all equipment using pulsed emission.

Input Requirement: For all stations using pulsed emissions, insert a numeric value(s) indicating the characteristic pulse duration(s) of the equipment at the half-power points. Pulse duration (PD) will be indicated in microseconds up to and including 999 microseconds and in milliseconds at one millisecond and above. Add the letter M at the end of the numeric value when expressed in milliseconds. Fractions may be shown to the nearest tenth by using a decimal. For equipment having a capability for continuously variable PDs over wide range(s), insert upper and lower numerical values separated by a dash.

Example:

346. 1	(Inserts or changes the PD values of 1, 3, and 5.6
346/2. 3	microseconds for the first three values and inserts
346/3. 5.6	a 1 to 25 millisecond PD range for the fourth value.)
346/4. 1M-25M	

Pulse Repetition Rate 347

9 or 9-9 characters - 30 occurrences

Submitted to IRAC: yes GMF tag: *PRR

Description: Data Item 347 indicates the number of pulses per second (PPS) for all equipment using pulsed emission.

Input Requirement: For all stations using pulsed emissions, enter the numeric value(s) for the pulse repetition rate(s) (PRRs) of the equipment. PRRs will be indicated in pulses per second (PPS) up to and including 999 PPS and in thousands of pulses per second at 1000 PPS and above, adding the letter K after the numeric value. For equipment having a capability for continuously variable PRRs over a wide range(s), insert upper and lower numerical values separated by a dash.

Example:

347. 500	(Inserts the PRR values of 500, 750, and 1000 PPS
347/2. 750	for the first three entries and a 200 to 999 PPS
347/3. 1K	range for the fourth value.)

Intermediate Frequency 348

11 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 348 provides the intermediate frequency (an image frequency at any given point in the tuning range) value resulting from a frequency conversion into a fixed, lower carrier (before demodulation).

Input Requirement: Data Item 348 is required for USCINCEUR assignments. It is optional for all others. Precede the intermediate frequency value with unit indicators as follows:

- K** - If frequency is less than 30 MHz
- M** - If frequency is at least 30 MHz, but less than 100 GHz
- G** - If frequency is at least 100 GHz, but less than 3 THz
- T** - If frequency is 3 THz or greater

Example:

348. M450

Sidelobe Suppression 349

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 349 indicates whether a portion of the radiation from an antenna outside of the main beam and usually of much less intensity has been suppressed or eliminated. The suppression or elimination of unwanted signals or interference takes place by means of shielding, filtering, grounding, component relocation, or sometimes redesign of the equipment in use.

Input Requirement: Data Item 348 is required for USCINCEUR assignments. It is optional for all others. For Radar assignments enter one of the following codes:

- Y** - Sidelobe suppressed
- N** - Sidelobe not suppressed

Example:

349. Y

TRANSMITTER ANTENNA DATA

Transmitter antenna data consists of data items 354 through 374. When both fixed and mobile stations (FA/MA, FC/MS, etc.) are used, enter the fixed antenna data first.

Antenna Name 354

10 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: part of XAD

Description: Data Item 354 is the generic name for the type of antenna normally associated with the transmitter.

Input Requirement: This data item is required for transmitter antennas at terrestrial stations, except experimental and mobile stations, that operate at 29890 kHz and above. If necessary, abbreviate to 10 characters. Entry not required if application is (a) below 29890 kHz, (b) space or earth station.

Examples:

354. WHIP

354. PARABOLIC

Antenna Nomenclature 355

18 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: *EQT following the \$ symbol

Description: Data Item 355 is the standard military nomenclature or commercial manufacturer's make and model number of the transmitter antennas.

Input Requirement: Data Item 355 is required except when it is part of a satellite transponder. Indicate antenna's nomenclature or commercial manufacturer's model number, but omit the model number if the antenna is part of a satellite transponder. If only a commercial model or nomenclature is known, enter the manufacturer's code (from Annex D to this appendix) followed by the antenna model number.

Examples:

355. AS102 (Inserts a government antenna nomenclature)

355. RCATVM000IA (Inserts an RCA Corporation commercial antenna nomenclature.)

Antenna Structure Height 356

3 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 356 identifies the overall height (in meters) of the transmitter antenna support structure above ground level.

Input Requirement: Data Item 356 is required for CINCEUR assignments. It is optional for all others. Enter in meters the overall height of the antenna structure above ground level. This entry is not applicable to Mobile services.

Example:

356. 17

Antenna Gain 357

4 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: part of XAD: negative gains are in *EGN, *SGN

Description: Data Item 357 indicates the antenna gain, in decibels, with reference to an isotropic source (dBi) in the direction of maximum radiation.

Input Requirement: Enter the antenna gain (in dB with reference to an isotropic source) in the direction of maximum radiation. The gain may be omitted on applications for terrestrial stations below 29890 kHz if the gain is for other than fixed (FX) or aeronautical fixed (AX) stations in the 3000 to 29890 kHz band, or for terrestrial stations operating at 29890 kHz and above for experimental and mobile stations. For a negative gain (earth and space stations only), enter a dash before the value of the gain.

Examples:

357. -10

357. 20

Antenna Elevation 358

5 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: part of XAD

Description: Data Item 358 specifies the site's terrain elevation, in meters above mean sea level (AMSL), at the base of a fixed station's transmitter antenna. If the antenna is installed on a structure such as a tower or a building, the site elevation is specified as the ground elevation at the base of the structure.

Input Requirement: Data Item 358 is required except for applications for frequencies below 29890 kHz or for terrestrial stations operating at 29890 kHz and above if for experimental and mobile stations. Enter the site (terrain) elevation (at the base of the transmitting antenna structure) in meters AMSL.

Example:

358. 980

Antenna Feed Point Height..... 359

5 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: Part of XAD

Description: Data Item 359 indicates the distance (in meters) between the transmitter antenna's feedpoint and the terrain.

Input Requirement: Data Item 359 is required except for applications for frequencies below 29890 kHz or for terrestrial stations operating at 29890 kHz and above if for experimental and mobile stations. Enter in meters, the antenna feed point height above the terrain. In the case where the antenna is mounted pointing vertically to a reflector on the same structure, enter the height of the reflector above ground.

Example:
359. 10

For airborne satellite terminals, enter the maximum operational altitude of the aircraft in meters AMSL.

Example:
359. 10000

Antenna Horizontal Beamwidth 360

4 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: part of XAD, sometimes entered in *EBW, *SGW

Description: Data Item 360 describes the angular beamwidth (measured in degrees at the half-power (3 dB) points) of space, earth or terrestrial station antennas (including experimental) employing earth or space-station techniques.

Input Requirement: For space, earth, or terrestrial stations (including experimental) employing space or earth station techniques, enter the antenna beamwidth (in degrees) at the half-power (-3 dB) points. For a fractional beamwidth, add a zero before the decimal.

Examples:
360. 0.5
360. 12
360. 17.2

Antenna Vertical Beamwidth 361

3 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 361 indicates the transmitter antenna vertical beamwidth, measured in degrees and normally taken as the angle between the half power points (-3 dB points) from the pattern of the antenna.

Input Requirement: Data Item 361 is required for CINCEUR assignments. It is optional for all others. Enter the half-power vertical beamwidth in degrees, measured between the -3 dB points.

Example:

361. 23

Antenna Orientation 362

3 or 3,3 or 3,3-3 or 3,3/3 characters - 10 occurrences

Submitted to IRAC: yes GMF tag: XAZ, Enter in XAD when this is a space assignment.

Description: Data Item 362 describes the physical direction or movement of the transmitter antenna. A second entry indicating the azimuth angle of the antenna's main beam may also be given. This second entry, given in degrees clockwise from true north, applies only to earth stations or terrestrial stations employing earth-station techniques.

Input Requirement: This data item is required for all earth, space, and terrestrial stations.

a. **Terrestrial Antenna:** Enter the three-digit azimuth in degrees from true north or one of the codes listed below for the transmitter antenna.

Antenna Codes

- ND** - nondirectional
- R** - rotating through 360 degrees
- S** - fixed direction but steerable in the horizontal plane
- SSH** - scanning horizontally through a limited sector
- SSV** - vertical scanning (nodding)
- T** - tracking that can observe a moving object.

Examples:

362. 225

362. ND

b. **Earth Station:** Enter the antenna's minimum operating elevation in degrees consisting of V followed by a two-digit value. Follow the vertical data with a comma and the three-digit azimuth in degrees from true north to the geostationary satellite. For more than two nongeostationary satellites, enter the maximum range of the azimuth angle in three-digit values separated by a dash.

Examples:

362. V09,133

362. V12,122-160

- c. **Space Station:** Enter either NB for narrow beam or EC for earth coverage.

Example:

362. EC

Antenna Polarization 363

1 character - 10 occurrences

Submitted to IRAC: yes GMF tag: XAP

Description: Data Item 363 is a one-character code indicating the polarization of the electromagnetic radiation from the antenna.

Input Requirement: Enter the polarization of the antenna using one of the following symbols:

Code	Polarization
A	Elliptic, left
B	Elliptic, right
D	Rotating
E	Elliptical
F	45-degrees
H	Fixed horizontal
J	Linear
L	Left-hand circular
M	Oblique, angled left
N	Oblique, angled right
O	Oblique, angled, crossed
R	Right-hand circular
S	Horizontal and vertical
T	Right and left-hand circular
V	Fixed vertical
X	Other or unknown

Data Item 363 is required for each transmitter antenna as described below:

a. Assignments above 1000 MHz that must be coordinated (by the IRAC) with the Canadian Department of Communications.

b. Assignments to earth or space stations or to terrestrial stations (including experimental stations) employing earth or space-station techniques.

c. Assignments to terrestrial stations at 420 MHz and above except for the optional cases shown below:

- (1) Experimental stations
- (2) Mobile stations
- (3) Meteorological aids in the 1660-1700 MHz band
- (4) TACAN/DME in the 960-1215 MHz band
- (5) Aeronautical telemetry in the 1435-1535, 2200-2290, or 2310-2390 MHz bands

Example:

363. V

JSC Area Code..... 373

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: This is a one-character code computer-generated by the JSC from Data Item 300. It indicates a minor area of the world in which the transmitter is located and is used to reduce computer search time. The list of approved codes are listed in Annex E to this appendix.

Input Requirement: This is a JSC computer-generated output data item.

Example:

373. A

ITU Region..... 374

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 374 is a single integer (1, 2, or 3) indicating an ITU-designated region of the world in which the transmitter is located.

Input Requirement: This data item is computer-generated by the JSC for ITU records only.

Example:

374. 2

RECEIVER LOCATION DATA

A maximum of 30 receiver locations are permitted in a frequency assignment record. Receiver location data consists of data items 400 through 408 . When multiple occurrences of receiver location data occur, the data entries must correspond in the same sequence throughout; that is, proper alignment of multiple occurrence entries must be maintained so each specified data item will be associated with the correct receiver. Additionally, each set of equipment and antenna data must be associated with a particular occurrence of a receiver location site.

When more than one receiver location is involved, the corresponding information in the data items will be designated as R01 or R02, etc. For example, **401. TAMPA,R01 401. MIAMI,R02** indicates that receiver number one is in Tampa and receiver number two is in Miami. **Only one occurrence of each of the 400-408 series data items is permitted for a particular receiver location.**

State/Country 400

4 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: RSC

Description: Data Item 400 is an authorized abbreviation for the state, country, or geographical area in which the receiving station is located. The approved list of abbreviations are listed in Annex C to this appendix.

Input Requirement: This data item is required. Enter the name or abbreviation of the state, country, or area in which the receiving antenna is located.

Example A:

400. NC (a single or first occurrence for a receiver)

Example B:

400. TN,R01 (an example of two receivers)

400. SPCE,R02

Antenna Location 401

24 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: RAL

Description: Data Item 401 is the name of the city, base, or geographical area of operation within which the receiving antenna is actually located.

Input Requirement: This data item is required. Enter the name of the city, base, or geographical area where the receiver antenna is located. Abbreviate the data entry if necessary; however, if an abbreviation is required, the entry should be spelled the same as that in the US Postal Zip Code Directory or applicable gazetteer. After a name has been entered the first time, all future entries for that same location should use the same spelling. If the receiver antenna location is the same as the entry in Data Item 400, the

antenna location will be abbreviated using the same abbreviation entered in Data Item 400.

a. In addition to the above, the following standard abbreviations will be used even if the entry is less than 24 characters.

Abbreviation	Location Word
ARPT	Airport
ARA	Army Area
CP	Camp
CY	City
CGD	Coast Guard District
CO	County
DI	District
DIV	Division
FT	Fort
IAP	International Airport
IS	Island(s)
LNB	Large Navigational Buoy
MT	Mont, Monte, Mount(s)
MTN	Mountain(s)
MAP	Municipal Airport
PG	Proving Ground(s)
PT	Point
ST	Saint

b. If the location name exceeds 24 characters after applying the standard abbreviation(s) listed in ~~the~~ above, and the entry has not been previously used, then shorten the entry to 24 characters and enter the full text in Data Item 801 for review by the assignment authority.

If an area of operation is involved, it may be described as a radius, in kilometers, extending from a given location. For example, if an assignment is for transmission anywhere within a 50-kilometer radius of Dallas, then insert DALLAS in this data item and the radius in Data Item 306 (Authorized Radius). An area of operation may also be described by geographical coordinates. For example, if an assignment is for one or more land mobile stations operating south of 33 degrees north in the state of Arizona, then insert AZ in this data item and the coordinate data in Data Item 530 (Authorized Areas).

An area of operation within several states may also be described in this data item as US or USA, with the included or excluded states being shown in Data Item 531 (Authorized States). Similarly, US&P may be used if the area includes a possession. For locations described as an area of operation, note that operations might not occur in every square

mile of the area concerned and that the area described might overlap into states not shown in Data Item 300 (State/Country).

While the data inserted shall normally be geographical names or descriptions, exceptions may be made for experimental operations, mobile operations where the state/country and antenna location data items are identical (such as PAC PAC, etc.), and/or space operations. For an assignment to an experimental station, other than one in space, or to a mobile station having identical state/country and antenna location names, words such as AIRCRAFT, BALLOONS, or SHIPS may be used as appropriate. For an assignment to a station aboard a geostationary satellite, insert GEOSTATIONARY. For an assignment to a station aboard a nongeostationary satellite, insert NONGEOSTATIONARY. For an assignment to a station located on a natural object in space, insert the name of the object, e.g., MOON.

Examples:

401. FT BRAGG

401. NASHVILLE,R05

401. NONGEOSTATIONARY

Receiver Control..... 402

18 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: RRC (Only the first eight characters are sent to

NTIA.)

Description: Data Item 402 is used to identify the operating unit that controls, either electrically or administratively, the receiver station when it is different from the data entered in Data Item 207. Data Item 402 is not used by the Air Force.

Input Requirement: Enter the operating unit or department (when it is different from the data entered in Data Item 207) that controls, whether administratively or electronically, the receiving station.

Example:

402. P.C.

Antenna Coordinates 403

15 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: RLA, RLG

Description: Data Item 403 is the WGS 84 datum latitude and longitude (expressed in degrees, minutes, and seconds) of the receiver antenna location(s) entered in Data Item 401.

Input Requirement: Data Item 403 is required except when the site named in Data Item 401 is an area of operation for which coordinates cannot be applied and for nongeostationary satellites. Enter geographical coordinates (degrees, minutes, and seconds) for the antenna location. If the seconds are not known, insert 00 for the seconds, except in the case of the NAVAIDS, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees latitude require two digits; degrees longitude require three digits. Enter N or S for latitude and E or W for longitude. If *GEOSTATIONARY* has been entered in Data Item 401, enter the latitude as 000000N and the longitudinal position of the satellite (in degrees, minutes, and seconds east or west). Note, when older maps are used, the coordinates may vary as much as 300-400 meters from locations determined by using DoD standard WGS 84 datum maps or Global Positioning System (GPS) equipment. Organizations are encouraged to obtain GPS equipment to determine the position of fixed antennas.

Examples:

403. 422615N1263228W

403. 000000N0925300W

Call Sign 404

10 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: ACL (Only the first eight characters are sent to NTIA.)

Description: Data Item 404 is the international call sign assigned to the receiving station. For navigational aids, this data item is used for the NAVAIDS identifier instead of a call sign.

Input Requirement: Data Item 404 is used for the international call sign assigned to the receiving station. Leave this data item blank if the call sign is either a local voice or tactical call sign, or if it is not applicable. For navigational aids, enter the NAVAIDS identifier.

Example:

404. WUH55

Authorized Radius 406

4 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *RAD

Description: Data Item 406 defines the area of operation for portable, mobile, or transportable receiver stations. This area is expressed as a radius in kilometers extending from the coordinates listed in Data Item 403.

Input Requirement: If Data Item 306 is blank and the receiving station is portable, mobile, or transportable and a circular area is used to describe the area of operation, enter the radius (in kilometers from the coordinates entered in Data Item 403) to describe the area in which the receiving station will operate. (Note: When both fixed and mobile stations transmit on the same frequency, an entry in Data Item 406 indicates that the mobile station will be operating within the area described).

Example:

406. 250

Path Length 407

5 characters - 1 occurrence per receiver location

Submitted to IRAC: no GMF tag: None

Description: Data Item 407 shows the distance (in kilometers) between the terrestrial transmitter and receiver stations. It is applicable only to fixed service facilities operating between 4 and 30 MHz.

Input Requirement: This is a JSC computer-generated output data item.

Repeater Indicator 408

1 character - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *RPT

Description: Data Item 408 indicates if the receiver station is used primarily as a repeater. A direct coupling between the station's receiver and the station's transmitter allows the incoming signal to be retransmitted exactly as received.

Input Requirement: Input for Data Item 408 is applicable only between 29890 and 420 MHz. Enter the letter R for each receiver location when a station in the fixed or mobile service is used primarily as a repeater.

Example:

408. R,R02

SPACE STATIONS

A maximum of 30 space-station receiver stations are permitted in a frequency assignment record. Data items 415 through 419 are to be used for unique space station data. Leave data items 415 through 419 blank for geostationary satellites.

Equatorial Inclination Angle 415

4 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *ORB preceding IN

Description: Data Item 415 indicates the angle at which the nongeostationary receiving satellite's orbit crosses the equator. A nongeostationary satellite is defined as one whose circular orbit does not lie in the plane of the earth's equator and that has a specific equatorial inclination, apogee, and perigee.

Input Requirement: Enter equatorial inclination angle (degrees) for nongeostationary space receiver stations.

Example:
415. 34.7

Apogee..... 416

5 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *ORB preceding AP

Description: Data Item 416 indicates the point in the orbit of a nongeostationary receiver satellite at which it is farthest from the earth.

Input Requirement: Enter apogee (in kilometers) for nongeostationary space receiver stations.

Example:
416. 23100

Perigee..... 417

5 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *ORB preceding PE

Description: Data Item 417 indicates the point in the orbit of a nongeostationary receiver satellite at which it is nearest to the earth.

Input Requirement: Enter perigee (in kilometers) for nongeostationary space receiver stations.

Example :
417. 200

Period of Orbit 418

7 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *ORB

Description: Data Item 418 indicates the time it takes for a nongeostationary receiver satellite to make one complete orbit.

Input Requirement: Enter period of orbit for nongeostationary space receiver stations. If the period of orbit it is less than 24 hours, enter the time in hours followed by the letter H. If the period is 24 hours or more, enter the number of days followed by the letter D.

Example:

418. 19.6H

Number of Satellites..... 419

2 characters - 1 occurrence per receiver location

Submitted to IRAC: yes GMF tag: *ORB

Description: Data Item 419 indicates the number of nongeostationary receiving satellites in a system having similar orbital characteristics.

Input Requirement: Enter the number of nongeostationary satellites in the system.

Example:

419. 24

RECEIVER EQUIPMENT

A maximum of 30 receiver locations are permitted in a frequency assignment record. When both fixed and mobile stations (FA/MA, FC/MS, etc.,) are used in data items 440 through 443, enter the fixed receiver data first.

Equipment Nomenclature..... 440

1,18 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: *EQR

Description: Data Item 440 is a two-part data item. The first part identifies the type of equipment (government, commercial, or unassigned), and the second part identifies either the standard military nomenclature or the commercial make and model number of the equipment at each specific receiver station location. If both a military nomenclature and a commercial model number are assigned to the same equipment, the military nomenclature will be used.

Input Requirement: This data item is required. Enter an equipment type code followed by the equipment system or component nomenclature for the receiver location. (Data items 440 and 443 are interrelated, and an entry in Data Item 440 should be accompanied by a corresponding entry in Data Item 443, if known and if it is different from the entries in data items 340 and 343.) Enter one of the following codes:

G - Government nomenclature
C - Commercial model number
U - Unassigned nomenclature

After the equipment type code, enter a comma and then the nomenclature subject to the following:

(1) For government equipment nomenclatures, enter the standard military nomenclature.

Example:

440/2. G,AN/ARC-121,R03 (The second receiver equipment at the third receiver location)

(2) If only a commercial model number is available, indicate the manufacturer of the equipment using the manufacturer's codes listed in Annex D to this appendix, followed by the model number. If no manufacturer code exists, enter the full name of the manufacturer in Data Item 801.

(3) If the nomenclature includes a modification, insert MOD and a number, if applicable, immediately following the nomenclature. For the word MARK, insert MK immediately following the nomenclature.

(4) If the receiver does not have an assigned government nomenclature or commercial model number, enter the manufacturer's name and a brief description of the equipment in Data Item 801.

Example:

440. C,MOTH23FFN1130E (An equipment nomenclature at the first receiver location)

Rx Aircraft Nautical Mile Value..... 442

4 characters - 1 occurrence per each receiver location

Submitted to IRAC: no GMF tag: *RAD

Description: Data Item 442 contains the receiver radius of aeronautical assignment group frequency area of operation in nautical miles and is generated from Data Item 406.

Input Requirement: This is an NTIA computer-generated output data item.

Example:

442. 200

Equipment Allocation Number 443

7 characters - 10 occurrences per each receiver location
Submitted to IRAC: no GMF tag: None

Description: Data Item 443 indicates the allocation number assigned to the receiver equipment by the J/F-12 Working Group.

Input Requirement: Enter the equipment J-12 allocation number (DD Form 1494) if known and if it is different from the entries in data items 340 and 343. Include a slash / and the revision number when appropriate. (Data items 440 and 443 are interrelated, and each entry in Data Item 443 must be accompanied by a corresponding entry in Data Item 440.)

Examples:

443. 1269
443. 377/2

RECEIVER ANTENNA DATA

A maximum of 30 receiver locations are permitted in a frequency assignment record. Receiver antenna data (consists of data items 454 through 463) is required for space and earth stations, fixed (point-to-point) and fixed station receivers or repeaters to which a mobile station transmits. (In other instances, the data entry is optional.)

Antenna Name 454

10 characters - 10 occurrences per each receiver location
Submitted to IRAC: yes GMF tag: part of RAD

Description: Data Item 454 is the generic name for the type of antenna.

Input Requirement: Enter the generic name for the type of the antenna. Data Item 454 is required for each receiver antenna for terrestrial stations, except experimental and mobile stations, that operate at 29890 kHz and above. If necessary, abbreviate the data entry to 10 characters. This entry not required if the application is (a) below 29890 kHz, (b) a space or earth-station, or (c) a mobile-to-mobile station.

Example:

454. WHIP,R02 (Two antennas at the second receiver location)
454/2. DIPOLE,R02

Antenna Nomenclature 455

18 characters - 10 occurrences per each receiver location
Submitted to IRAC: yes GMF tag: *EQR following the \$ symbol

Description: Data Item 455 is the standard military nomenclature or commercial manufacturer's make and model number of the antenna.

Input Requirement: Data Item 455 is required except when it is part of a satellite transponder. Indicate antenna's military nomenclature or commercial manufacturer's model number. If only a commercial model or nomenclature is known, enter the manufacturer's code (from Annex C of this appendix) followed by the antenna model number.

Examples:

455. AS102	(Inserts a government antenna nomenclature)
455. RCATVM000IA	(Inserts RCA Corporation's commercial antenna nomenclature.)

Antenna Structure Height 456

3 characters - 10 occurrences per each receiver location

Submitted to IRAC: no GMF tag: None

Description: Data Item 456 identifies the overall height in meters of the receiver antenna support structure above ground level.

Input Requirement: Data item 456 is required for USCINCEUR assignments. It is optional for all others. Enter, in meters, the overall height of the antenna structure above ground level. This entry not applicable to mobile services.

Example:

456. 17

Antenna Gain 457

4 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: RAD; negative gains are in *SGN, *EGN

Description: Data Item 457 indicates the antenna gain in decibels with reference to an isotropic source (dBi) in the direction of maximum radiation.

Input Requirement: Enter the antenna gain (in dB with reference to an isotropic source) in the direction of maximum radiation. Gain may be omitted on applications for terrestrial stations below 29890 kHz if the gain is for other stations than fixed (FX) or aeronautical fixed (AX) stations in the 3000 to 29890 kHz band, or for terrestrial stations operating at 29890 kHz and above for experimental or mobile stations. For a negative gain (earth and space stations only), enter a dash before the value of gain.

Examples:

457. -27

457/1. 0,R02 (Gains for two antennas at the second receiver location)
457/2. 1,R02

Antenna Elevation 458

5 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: part of RAD

Description: Data Item 458 specifies the site's terrain elevation, in meters AMSL, at the base of a fixed station's receiver antenna. If the antenna is installed on a structure such as a tower or a building, the site elevation is specified as the ground elevation at the base of the structure.

Input Requirement: Data Item 458 is required except for applications for frequencies for terrestrial stations operating at 29890 kHz and above for experimental or mobile stations. Enter the site (terrain) elevation in meters AMSL.

Antenna Feed Point Height..... 459

5 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: part of RAD

Description: Data Item 459 indicates the distance (in meters) between the receiver antenna's feedpoint and the terrain.

Input Requirement: Data Item 459 is required except for frequencies for applications below 29890 kHz, or for terrestrial stations operating at 29890 kHz and above for experimental or mobile stations. Enter in meters, the antenna feed-point height above the terrain. In the case where the antenna is mounted pointing vertically and the signal is received from a reflector on the same structure, enter the height of the reflector above ground. For airborne satellite terminals, enter the maximum operational altitude of the aircraft in meters AMSL.

Examples:

459. 10000 (an aircraft satellite antenna)

459. 30 (a terrestrial antenna)

Antenna Horizontal Beamwidth 460

4 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: part of RAD, sometimes entered in *EBW,
*SGW

Description: Data Item 460 describes the angular beamwidth (measured in degrees at the half-power (3 dB) points) of space, earth, or terrestrial stations antennas (including experimental) employing space or earth-station techniques.

Input Requirement: For space, earth, or terrestrial stations (including experimental) employing space or earth-station techniques, enter the antenna beamwidth (in degrees) at the half-power (-3 dB) points. For a fractional beamwidth, prefix the decimal with a zero. Data may be omitted for terrestrial stations operating at 29890 kHz and above for experimental or mobile stations.

Examples:

460. 0.5

460. 12

Antenna Vertical Beamwidth 461

3 characters - 10 occurrences per each receiver location

Submitted to IRAC: no GMF tag: None

Description: Data Item 461 indicates the receiver antenna vertical beamwidth, measured in degrees and normally taken as the angle between the half-power points (-3 dB points) from the pattern of the antenna.

Input Requirement: Data Item 461 is required for USCINCEUR assignments. It is optional for all others. Enter the half-power vertical beamwidth in degrees, measured between the -3 dB points.

Example:

461. 23

Antenna Orientation 462

3 or 3,3 or 3,3-3 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: RAZ, Enter in RAD when this is a space assignment.

Description: Data Item 462 describes the physical direction or movement of the receiver antenna. A second entry indicating the azimuth angle of the antenna's main beam may also be given. This second entry, given in degrees, clockwise from true north, applies only to earth stations or terrestrial stations employing earth station techniques.

Input Requirement: This data item is required for all earth, space, and terrestrial stations.

a. **Terrestrial Antenna:** Enter the three-digit azimuth in degrees from north or enter one of the antenna codes listed below for the receiving antenna:

- ND** - Nondirectional
- R** - Rotating through 360 degrees
- S** - Fixed direction steerable in the horizontal plane

- SSH** - Scanning horizontally through a limited sector
- SSV** - Vertical scanning (nodding)
- T** - Tracking to observe a moving object.

Examples:

462. 225

462. ND

b. **Earth Station:** Enter the antenna's minimum operating elevation, in degrees, consisting of a V followed by a two-digit value. Follow the vertical data with a comma and the three-digit azimuth, in degrees, from true north to the geostationary satellite. For two geostationary satellites, enter the three-digit azimuth to each satellite, separated by a slant bar. For more than two geostationary or nongeostationary satellites, enter the maximum range of the azimuth angle in three-digit values separated by a dash.

Examples:

462. V09,133

462. V10,132/150

462. V12,122-160

c. **Space Station:** Enter either NB for narrow beam or EC for earth coverage.

Example:

462. EC

Antenna Polarization 463

1 character - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: RAP

Description: Data Item 463 is a one-character code indicating the polarization of the electromagnetic radiation from the antenna.

Input Requirement: Data may be omitted for terrestrial stations operating at 29890 kHz and above for experimental or mobile stations. Enter polarization of the antenna using one of the following symbols:

Code	Polarization
A	Elliptical, left
B	Elliptical, right
D	Rotating
E	Elliptical
F	45-degree
H	Fixed horizontal

J	Linear
L	Left-hand circular
M	Oblique angled, left
N	Oblique angled, right
O	Oblique angled, crossed
R	Right-hand circular
S	Horizontal and vertical
T	Right and left circular
V	Fixed vertical
X	Other or unknown

Data Item 463 is required for each receiver antenna as described below:

- a. Assignments above 1000 MHz that must be coordinated (by the IRAC) with the Canadian Department of Communications.
- b. Assignments to earth or space stations or to terrestrial stations (including experimental stations) employing earth or space-station techniques.
- c. Assignments to terrestrial stations at 420 MHz and above except for the optional cases shown below:
 - (1) Experimental stations
 - (2) Mobile stations
 - (3) Meteorological aids in the 1660-1700 MHz band
 - (4) TACAN/DME in the 960-1215 MHz band
 - (5) Aeronautical telemetry in the 1435-1535, 2200-2290, or 2310-2390 MHz bands

Example:

463. R

SPACE SYSTEMS

Data items 470 through 473 are to be used for unique space systems data.

Space Station Noise Temperature 470

4 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: *SNT

Description: Data Item 470 denotes the noise temperature of the receiving space stations.

Input Requirement: Data Item 470 is required only for a space station(s). Enter the space station noise temperature in degrees Kelvin.

Example:
470. 200,R02

Earth Station System Noise Temperature..... 471

4 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: *RNT

Description: Data Item 471 denotes the noise temperature of the receiving earth station(s).

Input Requirement: Data Item 471 is required only for a receiving earth station(s). Enter the earth-station system noise temperature in degrees Kelvin.

Example:
471. 60,R02

Equivalent Satellite Link Noise Temperature..... 472

4 characters - 10 occurrences per each receiver location

Submitted to IRAC: yes GMF tag: *ENT

Description: Data Item 472 denotes the noise temperature at the input of the earth-station receiver corresponding to the radio-frequency noise power that produces the total observed noise at the output of the satellite link. This excludes noise due to interference coming from satellite links using other satellites and from terrestrial systems.

Input Requirement: This entry is required for each earth station that receives signals from a geostationary space station using a simple frequency changing transponder. Enter noise temperature in degrees Kelvin, taking into consideration all satellite links received by the earth station on the frequency indicated.

Example:
472. 96,R03

JSC Area Code..... 473

1 character - 1 occurrence per each receiver location

Submitted to IRAC: no GMF tag: None

Description: Data Item 473 indicates a minor area of the world in which the receiver is located and is used to reduce computer search time. The list of approved codes are listed in Annex E to this appendix.

Input Requirement: This one-character code is computer-generated by the JSC from Data Item 400.

Example:
473. A

SUPPLEMENTARY DETAILS

Data items 500 through 531 contain various coded or free-text remarks generally relating to the assignment as a whole or clarifying the authorized area of operations.

IRAC Notes..... 500

4 characters - 10 occurrences²

Submitted to IRAC: yes GMF tag: NTS

Description: Data Item 500 is a 4-character code identifying the IRAC note(s) (less M notes) applicable to the frequency assignment. The five types of notes which may be entered in this data item are: C (coordination), E (emission), L (limitation), P (priority), and S (special). M (minute) notes are entered only in Data Item 501 (Notes--Free Text). A complete listing of IRAC notes is contained in Annex F to this appendix.

Input Requirement: Data Item 500 is used for US&P IRAC GMF assignments only. Data Item 500 is a four-character code identifying the IRAC note(s) (less M notes) applicable to the frequency assignment. Five types of notes may be entered in this data item: C (coordination), E (emission), L (limitation), P (priority), and S (special). M (minute) notes are entered only in Data Item 501 (Notes Free-Text Comments).

Example:
500. L116
500/2. C002

Notes Free-Text Comments..... 501

35 characters - 30 occurrences²

Submitted to IRAC: yes GMF tag: *NTS

Description: Data Item 501 is used to enter the M (minute) note(s) and complete the amplifying conditional comments as agreed to by the IRAC FAS. A complete listing of IRAC M notes is contained in Annex F to this appendix.

Input Requirement: For each M-note, include the M-note, a comma, and the associated amplifying text. Do not enter more than one M-note per data line.

Examples:

501. M003,WRCTV,WASHINGTON,DC

(a two-line entry)

501/2. M003,J SMITH (202) 841-5121

Description of Requirement 502

1440 Characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 502 is used to record those agency remarks which, while pertinent to the assignment, are not intended to be part of the application processed through the IRAC. These remarks, therefore, will be excluded from the GMF.

Input Requirement: Data Item 502 is optional. Enter as many lines of remarks as necessary; however, precede each line with the data item identifier 502. Order of occurrence identifiers are not permitted, e.g., 502/2. Do not split words between lines, and do not exceed 77 characters per line (including the data item number, punctuation, and spaces). Do not duplicate data entered in data items 503/520. To modify existing data, delete the entire entry and replace it with new data as shown in the following example.

Example:

502. \$

502. THIS ASSIGNMENT PROVIDES TWO ADDITIONAL VOICE CHANNELS

502. DCS 77BB01 DURING CONTINGENCY SITUATIONS.

Agency Free-Text Comments 503

35 characters - 30 occurrences²

Submitted to IRAC: yes GMF tag: *AGN

Description: Data Item 503 is used to record agency remarks in the applications processed through the IRAC. These remarks will, therefore, be included in the GMF. Remarks not intended for the GMF must be entered in Data Item 502 (Description of Requirement).

Input Requirement: Enter up to 35 characters per line and precede each line with the data item number. Remarks **not** intended for the IRAC should be entered in Data Item 502.

Example A:

503. ACME ELECTRONIC CORP TO SUPPORT IN

503/2. DEVELOPMENT OF EXP TELECOMMAND

503/3. SYSTEM. FINAL TESTING TO BE HELD AT

(Inserts four lines of agency text)

503/4. EXP TEST FACILITY.

Example B:

503/2. DEV OF EXP TELECOMMAND AND TRACKING

(In Example A above, this action would replace the second line of agency text.)

Example C:

503/5. USAF AND USN SPONSORED. (Adds a line to Example A)

Flight levels are required for FAA coordination of frequency assignments within the US&P. Flight level data will be entered in hundreds (100s) of feet. The data entry will be formatted as: FL (followed by three digits). Leading zeros are required.

Examples:

503. FL160

(This means 16,000 feet.)

503. FL035

(This means 3,500 feet.)

FAS Agenda or OUS&P Comments 504

72 characters - 5 occurrences²

Submitted to IRAC: yes GMF tag: FAS

Description: Data Item 504 contains information that is not required to be recorded in the GMF. The data entered will appear in the FAS Agenda Action File (ACTF) file and the FRRS permanent proposal records only. It will not appear in the GMF or FRRS central databases.

Input Requirement: Data Item 504 is used whenever it is necessary to provide information to the FAS members reviewing application agendas. Data Item 504 is **not** entered into the GMF or FRRS central databases.

Example A:

504. FIVE YEAR REVIEW UPDATE (A one-line example)

Example B:

504. THIS IS A RENEWAL OF AN EXISTING AUTHORIZATION

504/2. ASSIGNMENT INADVERTENTLY ALLOWED TO EXPIRE

(A two-line example)

NATO Pooled Frequency Code Number 505

5 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 505 provides data on communications associated with ground transmitters/receivers as well as aircraft operating in the 225-400 MHz frequency band.

Input Requirement: Data Item 505 is required for CINCEUR and USACOM assignments. For air/ground/air and air to air requirements in the 225-400 MHz band, enter a Type Special Assignment code. Use of this data item is optional for all other bands.

Code	Type Special Assignment
B	- air/ground/air requirements
A	- air to air requirements
P	- air/ground/air pool requirement

Upon approval of USCINCEUR assignments only, the Frequency Management Subcommittee (FMSC) will assign, from the groupings below, a code number identifying the type and nationality of a frequency pool:

0001 - 0199	United States
0700 - 0999	Special Operations Pools
2000 - 2299	Command and Miscellaneous Pools

Example data input:
505. P

Example of data returned from FMSC:
505. P0803

Supplementary Details 520

1080 characters - 1 occurrence²

Submitted to IRAC: yes GMF tag: SUP

Description: Data Item 520 includes the following data, if applicable, plus any additional amplifying information that would facilitate processing:

- Doppler shift, if a significant factor in the particular system
- A general description of the assignment requirement (applies to experimental stations)
- Sounder justification
- Coordination data
- Refer to NTIA manual, Chapter 9, for further details.

Input Requirement: This is a free-text data item. This data item is required on several assignments, e.g., experimental stations, transportable receiving earth stations, frequency diversity, sounders, etc. Order of occurrence identifiers are **not** permitted, e.g., 520/2. To modify existing data, either delete the entire entry and replace it with new data as shown in Example A, or add new data to the existing text as shown in

Example B. Additional details may be found in the *NTIA Manual*. Each line should be preceded by data item identifier 520. Do not split words between lines, and do not exceed 77 characters per line (including the data item number, punctuation, and spaces). Enter as many data lines as necessary to give a general description of the requirement, indicating specific use of the frequency(ies) or band(s).

Example A:

520. \$
520. COORDINATED WITH FAA AS0406

(The dollar sign deletes the existing entry, regardless of the number of lines, and permits new data to be added)

Example B:

520. COORDINATED WITH AF AND NAVY

(Inserts new entry or adds to existing entry for Renewal, or Modification type of transactions. See paragraph 3f(2) at the front of the document.)

Authorized Areas..... 530

3,35 characters - 30 occurrences

Submitted to IRAC: yes GMF tag: *ART, *ARR, *ARB

Description: Data Item 530 has two parts. Part one contains a 3-character coded data entry, and the second part describes geographical areas that cannot be described in data items 306/406 (Authorized Mileage Radius) or Data Item 531 (Authorized States).

Input Requirement: If the antenna location in Data Item 301 and/or Data Item 401 is the name of a state/country or USA, a part of a state/country or parts of several contiguous states/countries may be entered here (for a particular transmitter or receiver location. Do not enter data here if Data Item 531 is used). The following identifying codes are available:

ART - For transmitting in area shown

ARR - For receiving in area shown

ARB - For transmitting and receiving in area shown

For each entry, enter the identifying code followed by a comma and the data concerning the area, using state/country abbreviations as shown in Annex C to this appendix. Use the letter N for north, S for south, E for east, and W for west when describing areas by latitude and longitude. Separate data elements by a comma.

Examples:

530. ART,SW WY,NE UT,NW CO

530. ARR,S OF 33N

530. ART,S OF 40N, E OF 095W

Authorized States 531

3,35 characters - 6 occurrences

Submitted to IRAC: yes GMF tag: *LST, *LSR, *LSB, *EST, *ESR, *ESB

Description: Data Item 531 for assignments within the US&P and is used to include or exclude states whenever the transmitter and/or receiver antenna location is specified as an area of operation within several states.

Input Requirement: If the antenna location in Data Item 301 and/or Data Item 401 is specified as US, USA, or US&P for an area of operation within several states, enter the states to be included or excluded (for a particular transmitter or receiver location, do not enter data here if Data Item 530 is used). Precede each line with the data item number. Order of occurrence identifiers are not permitted, e.g. 531/2. The following identifying codes are available:

ESB - For transmitting and receiving in all states except those listed

ESR - For receiving in all states except those listed

EST - For transmitting in all states except those listed

LSB - For transmitting and receiving in the states listed

LSR - For receiving in the states listed

LST - For transmitting in the states listed.

Precede each line with one of the above identifying codes and a comma. Separate entries with commas as shown in the example. Use state abbreviations as shown in Annex C to this appendix.

Example A:

531. LST,CA,OR,WA

(a one-line data entry)

Example B:

531. EST,MD,VA,NC,SC,GA,FL,AL,TN,NY,PA

(a two-line data entry)

531. EST.VT.MI.WI.MN

OTHER ASSIGNMENT IDENTIFIERS

Data items 701 through 716 are used to identify the major headquarters' Frequency Action Officer and miscellaneous reference numbers relating to the assignment coordination process. Some data items are used to code assignments as various types of functional groupings or provide additional technical data for certain aeronautical assignments.

Frequency Action Officer..... 701

3 characters - 1 occurrence²

Submitted to IRAC: yes GMF tag: *AGN, FAO-

Description: Data Item 701 is a MILDEP code identifying the person or group responsible for the assignment. This item is not used if Data Item 010 equals A.

Input Requirement: This data item is required for Air Force assignments. It is optional for all others.

Examples:

701. 322

701. T04

Control/Request Number 702

15 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *AGN, CNO-

Description: Data Item 702 is the control/request number that allows subordinate organizations to track specific frequency applications.

Input Requirement: Enter the organizational control number as directed by the responsible agency or CINC.

Air Force MAJCOMs: Use the MAJCOM symbol followed by a space, the two-digit number for the year, a dash, and the annual sequential number.

Example:

702. ACC 81-007

Army Organizations in the Continental US (CONUS) Reporting to the Army

Communications-Electronics (C-E) Services Office: Use the two-digit-letter code for AFC or command, followed by the last digit of the current year and sequential four-digit annual number. Use leading zeros as needed.

Example:

702. AC81011

Navy Organizations: Enter the control/request number.

Example:

702. N-431-88

Europe: Use the EUCOM control number. Use leading zeros as needed.

Example:

USACOM Organizations: The Joint Frequency Management Office, Atlantic (JFMOLANT) will either assign the control/request number or provide guidance for creating a unique organizational numbering sequence.

Type of Service 704

1 character - 1 occurrence

Submitted to IRAC: yes GMF tag: *AGN,TOS- (Only used by the Army; this tag is being phased out.)

Description: Data Item 704 is a code used to identify the type of service/circuit involved.

Input Requirement: Data Item 704 is required for CINCEUR and USACOM assignments. Enter the type of circuit code from the following list:

- S** - Simplex
- D** - Duplex
- H** - Semiduplex
- Z** - Simplex net
- T** - One directional transmission
- B** - Broadcast
- M** - Simultaneous broadcast
- N** - Radionavigation
- L** - Radiolocation
- R** - Reception only
- X** - Radiodetermination

Example:

704. N

System Identifier 705

24 characters, 32 characters³ - 1 occurrence

Submitted to IRAC: yes GMF tag: *SYS

Description: Data Item 705 is a two-part data item. Part one identifies the primary function or purpose of the frequency assignment and part two provides amplifying information if necessary.

³A maximum of 35 characters, including spaces and the comma, are permitted for this entry.

Input Requirement: This entry may be used to eliminate entries in data items 503 (Free-text), 502 (Description of Requirement), and 520 (IRAC Supplementary Details) to reduce redundant database entries when the function and purpose of assignment is adequately described in Data Item 705. This data item is required for IRAC assignments using frequency bands 29.89-50, 162.0-174.0, or 406.1-420.0 MHz if the assignments do not contain IRAC Notes S141 or S322 in Data Item 500. Use in other frequency bands is optional, but must comply with listed identifiers. Data Item 705 is mandatory for all Army records. Select an entry from the approved standardized functions/purposes to be used as data entries for this data item from the list at Annex G to this appendix.

Examples:

705. LAW ENFORCEMENT

705. NAVAIDS CONTROLS,RUNWAY LIGHTS

705. MISC,FLIGHT SUPPORT

USCINCPAC Complement/FMSC Function Number 707

8 characters - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 707 identifies a family grouping of frequencies having a like or similar use in the USCINCPAC area. It also identifies the function number(s) used by the Frequency Management Sub-Committee (FMSC) to specify the operational use of frequencies in the USCINCEUR area.

Input Requirement: USCINCPAC - Enter the number used to identify a family grouping of frequencies that have a similar use. See Example A. USCINCEUR - Enter the function number(s) used by the FMSC to specify the operational use of frequencies. See Example B.

Example A:

707. 34120 (USCINCPAC)

Example B:

707. 100 (USCINCEUR)

707/2. 101 (USCINCEUR – second occurrence)

Host Country Docket Number 710

12 characters - 30 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 710 records the docket number assigned by the host (soil) country to the frequency authorization.

Input Requirement: Enter the docket/case if a number is assigned by the soil (host) country to the frequency authorization.

Examples:

710. F84-171

(GE)

710. 2AAZ0191

(FMSC)

Aeronautical Service Range and Height 711

6 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 711 is the flight level and service radius of aeronautical navigational aids and air traffic control assignments for frequencies above 29,890 kHz and low frequency beacons.

Input Requirement: This item is for EUCOM use only. Provide the flight level and service range of all aeronautical navigational aids and air traffic control assignments for frequencies above 29890 kHz and for low-frequency beacons. Enter service range (in nautical miles) using three digits followed by flight level (in thousands of feet) using three digits. The example indicates a 250-mile range at 50000 feet. **(For non-EUCOM frequency assignments, this type of data is entered in data items 306/406 and 503 as a flight level, in hundreds of feet.)**

Example:

711. 250050

Transmitter FMSC MRFL Number..... 715

(6 characters - 1 occurrence)

Submitted to IRAC: no GMF tag: None

Description: Data Item 715 records the assignment serial number as registered in the FMSC Master Radio Frequency List (MRFL).

Input Requirement: Enter the transmitter FMSC MRFL serial number of the frequency assignment as recorded in the FMSC MRFL. Leading zeroes are required if less than six digits are used.

Example:

715. 821234

Usage Code..... 716

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 716 is a coded entry denoting the usage and category of circuits.

Input Requirement: Data Item 715 is required for USCINCEUR, USCINCPAC, and USACOM assignments. It is optional for all others. Enter one of the following codes:

- 1 - Wartime circuits are required to be operated or to be ready for operation in peacetime (terminals are to be fully equipped with the appropriate installation and personnel).
- 2 - Wartime circuits that have a limited capability in peacetime for exchanging traffic between the planned terminals (equipment and personnel are shared with other Usage Code 2 circuits).
- 3 - Required for wartime only (equipment is, or will be, available).
- 4 - Required for occasional and temporary usage for training exercises or maneuver purposes.
- 5 - Required for the deployment phase of contingency operations.
- 6 - Required for the employment phase of contingency operations.
- 7 - Required for peacetime only.

Example:
716. 3

ADDITIONAL INFORMATION

In this data category, only data items 803 through 804 and 901 through 953 will be stored in the database record.

Coordination Data/Remarks 801

60 characters - 30 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 801 indicates the agencies with which coordination has been effected and contains any other free text remarks appropriate for processing the assignment.

Input Requirement: List agencies with which coordination has been effected (e.g., FAA, GAFC, etc.) and include any remarks that may be appropriate for processing the

assignment. Data Item 801 is not stored in the FRRS central database. Order of occurrence identifiers are not permitted, e.g. 801/2.

Example:

801. GAFC 021200Z AUG 82

Requestor Data..... 803

60 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 803 reflects the name and DSN number of the individual submitting the request.

Input Requirement: This data item is required. Provide name and telephone number of individual submitting request.

Example:

803. BROWN, 281-3824

Tuning Range/Tuning Increments 804

60 characters - 30 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 804 indicates the tuning range and the tuning increments of the equipment used on this record.

Input Requirement: Data Item 804 is required for USCINCEUR assignments. It is optional for all others. Enter the tuning range of the equipment. Enter units followed by the lower-and upper-frequency of the equipment. Separate frequencies with a dash. Also enter one of the following to indicate the largest tuning increment of the frequency(ies) listed in Data Item 110. Separate entries with a comma. Order of occurrence identifiers are not permitted, e.g. 804/2.

TUNING INCREMENTS

CONTINUOUSLY TUNABLE

10 HZ

100 HZ (.1 KHZ)

500 HZ (.5 KHZ)

1 KHZ

5 KHZ

10 KHZ

12.5 KHZ

20 KHZ

25 KHZ

50 KHZ

75 KHZ

100 KHZ

125 KHZ

200 KHZ

250 KHZ

500 KHZ

1 MHZ (1000 kHz)

CRYSTAL (not tunable)

OTHER (explain with text)

Example:

804. M250-300, 100 KHZ

Date Response Required..... 805

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 805 is the date by which either an assignment or nonassignment of requested frequencies is required to provide notifications to potential users.

Input Requirement: Data Item 805 is required only for frequency proposals to be processed within the European theater. It is optional for all others. Except in an unusual circumstance, this date should be at least 65 days from the date of the message release or initial request date. Enter the date as YYYYMMDD. Data Item 805 is not stored in the FRRS central database.

Example:

805. 19820315

Indication if Host Nominations Are Acceptable 806

60 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 806 indicates the user's acceptance or rejection of host-nation nominations for substitute frequencies entered in Data Item 110.

Input Requirement: Data Item 806 is required for CINCEUR assignments. It is optional for all others. Enter YES followed by a statement indicating band limitations and channelization requirements if host nation nominations are acceptable to fulfill the requirement. Enter NO followed by the reason why if other nominated frequencies cannot be used. Data Item 806 is not stored in the FRRS central database.

Example:

806. YES, BAND LIMITATIONS ARE...

Frequencies to be Deleted..... 807

60 characters - 10 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 807 lists the frequency(ies) that can be deleted upon assignment of the requested frequencies, the host docket numbers or GE case numbers and MRFL numbers when available.

Input Requirement: Data Item 806 is required only on frequency proposals to be processed within the European theater. List the frequencies that can be deleted upon assignment of the requested frequencies along with USCINCEUR Frequency Management Field Office Brussels, Belgium and/or GE case numbers and MRFL numbers when available. Leave this data item blank if no frequencies will be deleted. Data Item 807 is not stored in the FRRS central database.

Examples:

807. K14.5,USAREUR-81-266,
807. F61-836,131101

Record Status 901

(1 character - 1 occurrence)

Submitted to IRAC: no GMF tag: None

Description: Data Item 901 provides the status of an assignment in the master database.

Input Requirement: This data item is used by DoD only. Enter one of the following codes:

A - Active or **I** - Inactive

Example:

901. A

Proposal Status 903

4 characters - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 903 indicates the current (and previous statuses for historical purposes) of each DCF proposal. This data item is used in conjunction with Data Item 904.

Input Requirement: Some status codes are entered automatically by NTIA and DCF software. The list of acceptable status codes varies from one DCF to another. (See Annex H for a list of standardized codes used throughout the FRRS. See the DCF user's manual and local standard operating procedures (SOPs) for a more complete list of codes.). JSMSw software only stores the current status.

Example:

904. ACT (This record has been transferred to another DCF for action.)

Status Date 904

8 characters - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 904 indicates the date automatically entered as YYYYMMDD for a "Proposal Status" (Data Item 903). This date changes as the action/status of the proposal changes within the processing cycle.

Input Requirement: This is a computer-generated date entered as YYYYMMDD. It is automatically entered whenever the Proposal Status is changed in CCF or DCF software. In JSMSw software, the data must be manually entered. JSMSw only stores the date of the current status.

Example:

904. 19951231

Proposal Date-Time-Group..... 905

14 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 905 is the DTG on an AUTODIN message. (This data item is used in conjunction with Data Item 906.)

Input Requirement: This data item is used by DoD only. Data Item 905 is retrieved automatically from the header of the up-loaded proposal message in DCFs. In other instances, this data item must be entered manually.

Example:

905. 100800ZFEB96

Originator 906

66 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 906 describes the originator of the proposal as noted in the FM line of an AUTODIN message. (This data item is used in conjunction with Data Item 905.)

Input Requirement: This data item is used by DoD only. It is automatically entered from the FM (originator) line of an AUTODIN (Defense Message System) proposal message.

Example:

906. HQ ACC LANGLEY AFB VA

Validation Status 907

1 character - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 907 indicates the proposal's validation status.

Input Requirement: Data Item 907 is a computer-generated DCF or JSMSw software data item. The following codes are used:

Y - - Record passed validation.

N - - Record did not pass validation.

O - - Record did not pass validation and the lack of validation was overridden.

(Blank) - - Not validated.

Example:

907. Y

Exercise Project 910

20 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 910 provides the Project or Exercise name associated with a temporary assignment or proposal.

Input Requirement: This data item is optional.

Example:

910. GUARDRAIL

Date of Last Transaction..... 911

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 911 provides the date the record was last modified by a database transaction. This data item changes whenever any aspect of a record is changed such as when administrative, modification or delete transaction is posted to the central database master record.

Input Requirement: This data item is computer-generated as YYYYMMDD by the JSC central database computer.

Example:

911. 19920212

Participant Code 922

4 characters - 20 occurrences

Submitted to IRAC: no GMF tag: None

Description: Data Item 922 identifies the major FRRS participant and is used to distribute data to DCFs. The list of approved entries are: AIR, ARM, COE, EUR, JNS, LAN, MGU, NAV, PAC, PROD, and WSM. This data item can also be used to select records for special outputs production.

Input Requirement: Data Item 922 is a JSC computer-generated output data item.

Example:

922. EUR

922/2. PAC

922/3. AIR

Data Source Indicator 924

4 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 924 is used to identify the source or organization from which the data record was received:

FMSC - FMSC/MRFL data from NATO

CAN - Industry Canada

FCC - Federal Communications Commission

FRRS - Frequency Resource Record System

GMF - Government Master File

ITU - International Telecommunication Union

RA - Radio Astronomy data from the National Research Council

Input Requirement: Data Item 924 is a JSC computer-generated output data item.

Example:

924. ITU

Semi-Bandwidth 926

6 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 926 represents, in kilohertz, half of the emission bandwidth of the largest bandwidth given for the assignment.

Input Requirement: Data Item 926 is a JSC computer-generated output data item.

Example:

Date of Entry 927

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 927 is the date (YYYYMMDD) the assignment was initially entered into the FRRS database system.

Input Requirement: Data Item 927 is a JSC computer-generated output data item.

Example:

927. 19951230

Date of Receipt 928

8 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: This is the Date (YYYYMMDD) of receipt of the most recent transaction at the JSC.

Input Requirement: Data Item 928 is a JSC computer-generated output data item.

Example:

928. 19951229

PC ID 950

10 characters - 1 occurrence

Submitted to IRAC: no GMF tag: None

Description: Data Item 950 identifies the PC at which the transaction was originated. Normally, this occurs at organizational levels below where the serial number can be assigned. This data item is computer-generated by the JSMSw PC for new transactions.

Input Requirement: Input to this data item is required whenever there is no serial number in the record, and this input will normally be formatted as ACCCYNNNNN where:

ACCC = Up to four (4) characters, numerics or spaces unique to each PC. The assignment of these unique characters to a particular PC will be managed by the CINC or MILDEP having jurisdiction over the area/organization submitting PC-originated proposals.

The first character A is coded from the table below:

- A** - Army organizations within CONUS
- N** - Navy organizations within CONUS
- F** - Air Force organizations within CONUS
- P** - Organizations in the CINCPAC area
- L** - Organizations in the CINCUSACOM area
- E** - Organizations in the CINCEUR area
- S** - Organizations in the CINCSOUTH area
- C** - Organizations in the CINCCENT area

The next three characters **CCC** are uniquely assigned by the CINC or MILDEP.

YY = Last two digits of the calendar year

NNNN = Individual unique number assigned to each proposal

Example:

950. L4MD920001

IRAC Security Classification 952

1 character - 1 occurrence

Submitted to IRAC: yes GMF tag: CLA

Description: Data Item 952 is the classification of the GMF record that is maintained by NTIA.

Input Requirement: Data Item 952 is computer-generated for DoD organizations. It is only used internal to the JSC for administrative record management only.

U - UNCLASSIFIED

C - CONFIDENTIAL

Example:

952. C

IRAC Declassification Date 953

10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: CDD

Description: Data Item 953 is the declassification date (DEYYYYMMDD) of a GMF record.

Input Requirement: Data Item 953 is computer-generated for DoD organizations. It is only used internal to the JSC for administrative record management.

Example:

953. DE19951230

Agency Action Number..... 956

10 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: ACN

Description: Data Item 956 is a data entry used by non-DoD organizations to track transactions.

Input Requirement: Data Item 956 is used by Non-DoD organizations and is formatted the same as Serial Number (Data Item 102). This data item is not stored in the FRRS central database.

Example:

956. J 970001

Review Year 957

4 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: RYR

Description: Data Item 957 contains the year (in the format YYYY) that the assignment was originally entered into the GMF or last modified in the GMF.

Input Requirement: Data Item 957 is used by non-DoD organizations. This field is used ONLY when no other changes are required (i.e., all parameters as listed are up-to-date), and it is necessary to indicate a review of an assignment has been completed. This data item is not stored in the FRRS central database.

Example:

957. 1997

Routine Agenda Item..... 958

1 character - 1 occurrence

Submitted to IRAC: yes GMF tag: RTN

Description: Data Item 958 is a coded data entry that indicates the type of NTIA FAS agenda on which the application will be processed.

Input Requirement: Data Item 958 is computer-generated by NTIA for its internal processing of frequency assignment applications. It is an output data item only.

R - Routine Application
(Blank) - Regular Application
A - AAG Application

M - MAG Application

Example:

958. M

Circuit Remarks..... 959

40 characters - 30 occurrences

Submitted to IRAC: yes GMF tag: REM

Description: Data Item 959 is used by NTIA to record any additional data to be submitted by the applicant that can not be accommodated in any of the other GMF data items. Upon approval of the record by NTIA, the circuit remarks stored in the GMF are also stored in the FRRS central database, the distributed databases, and JSMSw databases for future reference. The data is also parsed and stored in the appropriate individual data items.

Input Requirement: Data Item 959 is computer-generated from 36 individual data items when the record is sent to NTIA.

Examples:

959. REM01 *ARB,39N43N098W099W

959. REM03 *ART,3915N4320N10016W1012W

FCC File Number 963

13 characters - 1 occurrence

Submitted to IRAC: yes GMF tag: *FLN

Description: Data Item 963 is an FCC-assigned file number, issued to non-government stations operating on government frequencies or government stations operating on nongovernment frequencies, which is unique to each FCC license.

Input Requirement: Data Item 963 is an output data item computer-generated by the FCC. This data item is not stored in the FRRS central database.

Example:

963. 0001-EX-AA-98

TX Aircraft Altitude..... 964

3 characters - 10 occurrence

Submitted to IRAC: no GMF tag: XAD for airborne satellite terminals

Description: Data item 964 contains the maximum operational altitude of an aircraft with a transmitter earth station aboard it. The entry will be in thousands of feet.

Input Requirement: Data Item 964 is computer-generated by the JSMS_W PC. It is converted from the entry in Data Item 359. This data item is not stored in the FRRS central database.

Example:

964. 3 (for 3,000 feet)

RX Aircraft Altitude 965

3 characters - 10 occurrences

Submitted to IRAC: no GMF tag: RAD for airborne satellite terminals

Description: Data Item 965 contains the maximum operational altitude of an aircraft with a receiver earth station aboard it. The entry will be in thousands of feet.

Input Requirement: Data Item 965 is computer-generated by the JSMS_W PC. It is converted from the entry in Data Item 459. This data item is not stored in the FRRS central database.

Example:

965. 50 (for 50,000 feet)

End notes

¹ MCEB-M-019098, 26 Jan 1998, DoD Frequency Assignment Security Classification Guide

² This data item is reserved for use by MILDEP, CINC, and Agency frequency management offices or their subordinate organizations when its use has been delegated to lower levels.

ANNEX A - LIST OF STATION CLASSES WITH DEFINITIONS

(alphabetical by classes)

1. The following list of station class codes are authorized for use in Data Item 113. Where a definition is followed by the parenthetical expression "(RR)," it is an indication that the definition is in the ITU Radio Regulations.

2. The suffix "R" shall be added to the established class of station (STC) symbol only if the station is to be used primarily as a repeater in the bands:

29.89-50.00 MHz (exclusive government bands).
138.00-144.00 MHz.
148.00-149.90 MHz.
150.05-150.80 MHz.
162.00-174.00 MHz.
406.10-420.00 MHz.

For this purpose, a repeater consists of a radio transmitter, a radio receiver and coupling between the two so as to retransmit unchanged in intelligence the received signal.

3. The following definitions of Stations and associated Station Class (STC-see Section 9.8.2, Para. 15a. through 15c.) symbols are used on U.S. government frequency assignments as applicable.

FAB--Aeronautical Broadcast Station: An aeronautical station which makes scheduled broadcasts of meteorological information and notices to airmen. (In certain instances, an aeronautical broadcast station may be placed on board a ship.)

TB--Aeronautical Earth Station: An earth station in the fixed-satellite service or in some cases in the aeronautical mobile-satellite service located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service. (RR)

AX--Aeronautical Fixed Station: A station in the aeronautical fixed service. (RR)

ALA--Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon.

EJ--Aeronautical Mobile-Satellite Space Station: A space station in the aeronautical mobile-satellite service. (RR)

ALC--Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon).

ALB--Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service intended for the benefit of aircraft.

AL--Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion.

AM--Aeronautical Radionavigation Mobile Station: A mobile station in the aeronautical radionavigation service intended to be used while in motion or during halts at unspecified points.

TZ--Aeronautical Radionavigation-Satellite Earth Station: A fixed earth station in the aeronautical radionavigation-satellite service.

TO--Aeronautical Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the aeronautical radionavigation-satellite service. (RR)

EO--Aeronautical Radionavigation-Satellite Space Station: A space station in the aeronautical radionavigation-satellite service. (RR)

FA--Aeronautical Station: A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea. (RR)

FG--Aeronautical Station (OR): An aeronautical station in the aeronautical mobile (OR) service. (RR)

FD--Aeronautical Station (R): An aeronautical station in the aeronautical mobile (R) service. (RR)

FLEA--Aeronautical Telemetry Land Station: A telemetry land station used in the flight testing of manned or unmanned aircraft, missiles, or major components thereof.

MOEA--Aeronautical Telemetry Mobile Station: A telemetry mobile station used for transmitting data directly related to the airborne testing of the vehicle. (or major components), on which the station is installed.

FLU--Aeronautical Utility Land Station: A land station located at airdrome control towers and used for control of ground vehicles and aircraft on the ground at airdromes.

MOU--Aeronautical Utility Mobile Station: A mobile station used for communication at airdromes with the aeronautical utility land station, the airdrome control station, the FAA flight service station, ground vehicles, and aircraft on the ground. (All transmissions shall be subject to the control of the airdrome control station and shall be discontinued immediately when so requested by the airdrome control operators.)

TJ--Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft. (RR)

MA--Aircraft Station: A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft. (RR)

FAC--Airdrome Control Station: An aeronautical station providing communication between an airdrome control tower and aircraft.

AMA--Altimeter Station: A radionavigation mobile station in the aeronautical radionavigation service which employs a radio altimeter.

TY--Base Earth Station: An earth station in the fixed-satellite service or in some cases in the land mobile-satellite service located at a specified fixed point or within a specified area on land to provide a feeder link for the land mobile-satellite service. (RR)

FB--Base Station: A land station in the land mobile service. (RR)

EB--Broadcasting-Satellite Space Station (sound broadcasting): A space station in the broadcasting-satellite service (sound broadcasting). (RR)

EV--Broadcasting-Satellite Space Station (television): A space station in the broadcasting-satellite service (television). (RR)

BC--Broadcasting Station (sound): A station (sound) in the broadcasting service. (RR)

BT--Broadcasting Station (television): A station (television) in the broadcasting service. (RR)

TI--Coast Station: An earth station in the fixed-satellite service or in some cases in the maritime mobile-satellite service located at a specified fixed point on land to provide a feeder link for the maritime mobile-satellite service. (RR)

FC--Coast Station: A land station in the maritime mobile service. (RR)

DGP--Differential-Global-Positioning-System (DGPS) Station: a terrestrial station used for the transmission of differential correction information to DGPS receivers aboard aircraft for navigation.

TW--Earth Exploration-Satellite Earth Station: An earth station in the Earth exploration-satellite service. (RR)

EW--Earth Exploration-Satellite Space Station: A space station in the Earth exploration-satellite service. (RR)

TP--Earth Station (receiving): An earth station used for receiving. (RR) (TP is not used on applications.)

XM--Experimental Composite Station: An experimental station used in experimental operations of a complex nature not readily specified or used in operation which is a composite of two or more of the established experimental categories.

XC--Experimental Contract Developmental Station: An experimental station used for the evaluation or testing under Government contract of electronics equipment or systems in a design or development stage.

XD--Experimental Developmental Station: An experimental station used for evaluation or testing of electronics equipment or systems in a design or development stage.

XE--Experimental Export Station: An experimental station intended for export and used for the evaluation or testing of electronics equipment or systems in the design or development stage.

XR--Experimental Research Station: An experimental station used in basic studies concerning scientific investigations looking toward the improvement of the art of radiocommunications.

EX--Experimental Station: A station utilizing radio waves in experiments with a view to the development of science or technique. This definition does not include amateur stations. (RR) (EX is not used on applications.)

XT--Experimental Testing Station: An experimental station used for the evaluation or testing of electronics equipment or systems, including site selection and transmission path surveys, which have been developed for operational use.

TC--Fixed-Satellite Earth Station: An earth station in the fixed-satellite service. (RR)

EC--Fixed-Satellite Space Station: A space station in the fixed-satellite service. (RR)

FX--Fixed Station: A station in the fixed service. (RR)

FLEB--Flight Telemetry Land Station: A telemetry land station the emissions of which are used for telemetry to a balloon; to a booster or rocket, excluding a booster or rocket in orbit about the Earth or in deep space; or to an aircraft, excluding a station used in the flight testing of an aircraft.

MOEB--Flight Telemetry Mobile Station: A telemetry mobile station used for transmitting data from an airborne vehicle, excluding data related to airborne testing of the vehicle itself, (or major components thereof).

FAT--Flight Test Station: An aeronautical station used for the transmission of essential communications in connection with the testing of aircraft or major components of aircraft.

ALG--Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.

FXH--Hydrologic and Meteorological Fixed Station: A fixed station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

FLH--Hydrologic and Meteorological Land Station: A land station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

MOH--Hydrologic and Meteorological Mobile Station: A mobile station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

ES--Inter-Satellite Space Station: A space station in the inter-satellite service. (RR)

VA--Land Earth Station: An earth station in the fixed-satellite service or in some cases in the mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the mobile-satellite service. (RR)

TU--Land Mobile Earth Station: A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent. (RR)

EU--Land Mobile-Satellite Space Station: A space station in the land mobile-satellite service. (RR)

ML--Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent. (RR)

FL--Land Station: A station in the mobile service not intended to be used while in motion. (RR)

ALL--Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.

RNL--Loran Station: A long distance radionavigation land station transmitting synchronized pulses. Hyperbolic lines of position are determined by the measurement of the difference in the time of arrival of these pulses.

FCB--Marine Broadcast Station: A coast station which makes scheduled broadcasts of time, meteorological, and hydrographic information.

NLC--Maritime Radar Beacon (racon) Station: A land station in the maritime radionavigation service which employs a radar beacon (racon).

NLM--Maritime Radiobeacon Station: A radiobeacon station in the maritime radionavigation service intended for the benefit of ships.

EG--Maritime Mobile-Satellite Space Station: A space station in the maritime mobile-satellite service. (RR)

NL--Maritime Radionavigation Land Station: A land station in the Maritime radionavigation Service not intended for use while in motion.

TX--Maritime Radionavigation-Satellite Earth Station: A fixed earth station in the maritime radionavigation-satellite service. (RR)

TQ--Maritime Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the maritime radionavigation-satellite service. (RR)

EQ--Maritime Radionavigation-Satellite Space Station: A space station in the maritime radionavigation-satellite service. (RR)

SM--Meteorological Aids Base Station: A land station in the meteorological aids service not intended for use while in motion.

SA--Meteorological Aids Mobile Station: A mobile station in the meteorological aids service intended to be used while in motion or during halts at unspecified points.

SMD--Meteorological Radar Station: A station in the meteorological aids service employing radar.

TM--Meteorological-Satellite Earth Station: An earth station in the meteorological-satellite service. (RR)

EM--Meteorological-Satellite Space Station: A space station in the meteorological-satellite service. (RR)

UA--Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points. (RR)

EI--Mobile-Satellite Space Station: A space station in the mobile-satellite service. (RR)

MO--Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points. (RR)

OE--Oceanographic Data Interrogating Station: A station in the maritime mobile service the emissions of which are used to initiate, modify or terminate functions of equipment directly associated with an oceanographic data station, including the station itself.

OD--Oceanographic Data Station: A station in the maritime mobile service located on a ship, buoy, or other sensor platform the emissions of which are used for transmission of oceanographic data.

ALO--Omnidirectional Range Station: A radionavigation land station in the aeronautical radio-navigation service providing direct indication of the bearing (omnibearing) of that station from an aircraft.

MAP--Portable Aircraft Station: A portable station operating in the aeronautical mobile service.

MLP--Portable Land Mobile Station: A portable station operating in the land mobile service.

MOP--Portable Mobile Station: A portable station operating in the mobile service.

MRP--Portable Radiolocation Station: A portable station operating in the radiolocation service.

MSP--Portable Ship Station: A portable station operating in the maritime mobile service.

FP--Port Station: A coast station in the port operations service.(RR)

SMB--Radar Beacon Precipitation Gage Station: A transponder station in the meteorological aids service, the emissions of which are used for telemetering.

RA--Radio Astronomy Station: A station in the radio astronomy service. (RR) (This is always a receiving station.)

MOB--Radio Beacon Mobile Station: A mobile station the emissions of which are used to determine its location.

TF--Radiodetermination-Satellite Earth Station: A fixed earth station in the radiodetermination-satellite service. (RR)

TL--Radiodetermination-Satellite Mobile Earth Station: A mobile earth station in the radiodetermination-satellite service. (RR)

EF--Radiodetermination-Satellite Space Station: A space station in the radiodetermination-satellite service. (RR)

RG--Radio Direction-Finding Station: A radiodetermination station using radio direction-finding. (RR)

LR--Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion. (RR)

MR--Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points. (RR)

RN--Radionavigation Land Station: A station in the radionavigation service not intended to be used in motion. (RR)

ALTM--Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.

ALTO--Radionavigation Land Test Station (Operational Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit the pilot to check a radionavigation system aboard the aircraft prior to takeoff.

NR--Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points. (RR)

TN--Radionavigation-Satellite Fixed Earth Station: A fixed earth station in the radionavigation-satellite service. (RR)

UM--Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the radionavigation-satellite service. (RR)

EN--Radionavigation-Satellite Space Station: A space station in the radionavigation-satellite service. (RR)

ALR--Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.)

SAR--Radiosonde Station: A station in the meteorological aids service employing a radiosonde.

SMRG--Radiosonde Ground Station: A station in the meteorological aids service employing a ground station associated with a radiosonde.

TE--Satellite EPIRB Station: A satellite Emergency Position-Indicating Radio Beacon (EPIRB) in the mobile-satellite service. (RR)

TG--Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship. (RR)

MS--Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station. (RR)

SN--Sounder Network Station: A station equipped with an ionosphere sounder used for the real-time selection of frequencies for operational communication circuits.

SP--Sounder Prediction Station: A station equipped with an ionosphere sounder for real-time monitoring of upper atmosphere phenomena or to obtain data for the prediction of propagation conditions.

TT--Space Operation Earth Station: An earth station in the space operation service. (RR)

ET--Space Operation Space Station: A space station in the space operation service. (RR)

TH--Space Research Earth Station: An earth station in the space research service. (RR)

EH--Space Research Space Station: A space station in the space research service.

ME--Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (RR) (ME is not used on applications.)

TD--Space Telecommand Earth Station: An earth station the emissions of which are used for space telecommand.

ED--Space Telecommand Space Station: A space station which receives emissions used for space telecommand.

TR--Space Telemetry Earth Station: An earth station which receives emissions used for space telemetry.

ER--Space Telemetry Space Station: A space station the emissions of which are used for space telemetry.

TK--Space Tracking Earth Station: An earth station which transmits or receives emissions used for space tracking.

EK--Space Tracking Space Station: A space station which transmits or receives and retransmits emissions used for space tracking.

SS--Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service. (RR)

EE--Standard Frequency Satellite Space Station: A space station in the standard frequency satellite service. (RR)

FLEC--Surface Telemetry Land Station: A telemetry land station the emissions of which are intended to be received on the surface of the Earth.

MOEC--Surface Telemetry Mobile Station: A telemetry mobile station located on the surface of the Earth and the emissions of which are intended to be received on the surface of the Earth.

ALS--Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.)

FAD--Telecommand Aeronautical Station: A land station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.

MAD--Telecommand Aircraft Station: A mobile station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.

FBD--Telecommand Base Station: A land station in the land mobile service the emissions of which are used for terrestrial telecommand.

FCD--Telecommand Coast Station: A land station in the maritime mobile service the emissions of which are used for terrestrial telecommand.

FXD--Telecommand Fixed Station: A fixed station in the fixed service the emissions of which are used for terrestrial telecommand.

FLD--Telecommand Land Station: A land station in the mobile service the emissions of which are used for terrestrial telecommand.

MLD--Telecommand Land Mobile Station: A mobile station in the land mobile service the emissions of which are used for terrestrial telecommand.

MOD--Telecommand Mobile Station: A mobile station in the mobile service the emissions of which are used for terrestrial telecommand.

MSD--Telecommand Ship Station: A mobile station in the maritime mobile service the emissions of which are used for terrestrial telecommand.

FXE--Telemetry Fixed Station: A fixed station the emissions of which are used for telemetry.

FLE--Telemetry Land Station: A land station the emissions of which are used for telemetry.

MOE--Telemetry Mobile Station: A mobile station the emissions of which are used for telemetry.

Stations (alphabetical by symbols)

1. Where a definition is followed by the parenthetical expression "(RR)," it is an indication that the definition is in the ITU Radio Regulations.

2. The suffix AR" shall be added to the established class of station (STC) symbol only if the station is to be used primarily as a repeater in the bands:

29.89-50.00 MHz (exclusive government bands).

138.00-144.00 MHz.

148.00-149.90 MHz.

150.05-150.80 MHz.

162.00-174.00 MHz.

406.10-420.00 MHz.

For this purpose, a repeater consists of a radio transmitter, a radio receiver and coupling between the two so as to retransmit unchanged in intelligence the received signal.

3. The following definitions of Stations and associated Station Class (STC) (see Section 9.8.2, paragraph 15a through 15c) symbols are used on U.S. government frequency assignments as applicable.

AL--Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion.

ALA--Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon.

ALB--Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service intended for the benefit of aircraft.

ALC--Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon).

ALG--Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.

ALL--Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.

ALO--Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omnibearing) of that station from an aircraft.

ALR--Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.)

ALS--Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.)

ALTM--Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.

ALTO--Radionavigation Land Test Station (Operational Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit the pilot to check a radionavigation system aboard the aircraft prior to takeoff.

AM--Aeronautical Radionavigation Mobile Station: A mobile station in the aeronautical radionavigation service intended to be used while in motion or during halts at unspecified points.

AMA--Altimeter Station: A radionavigation mobile station in the aeronautical radionavigation service which employs a radio altimeter.

AX--Aeronautical Fixed Station: A station in the aeronautical fixed service. (RR)

BC--Broadcasting Station (sound): A station (sound) in the broadcasting service. (RR)

BT--Broadcasting Station (television): A station (television) in the broadcasting service. (RR)

EB--Broadcasting-Satellite Space Station (sound broadcasting): A space station in the broadcasting-satellite service (sound broadcasting). (RR)

DGP--Differential-Global-Positioning-System (DGPS) Station: a terrestrial station used for the transmission of differential correction information to DGPS receivers aboard aircraft for navigation.

EC--Fixed-Satellite Space Station: A space station in the fixed-satellite service. (RR)

ED--Space Telecommand Space Station: A space station which receives emissions used for space telecommand. (RR)

EE--Standard Frequency Satellite Space Station: A space station in the standard frequency satellite service. (RR)

EF--Radiodetermination-Satellite Space Station: A space station in the radiodetermination-satellite service. (RR)

EG--Maritime Mobile-Satellite Space Station: A space station in the maritime mobile-satellite service. (RR)

EH--Space Research Space Station: A space station in the space research service. (RR)

EI--Mobile-Satellite Space Station: A space station in the mobile-satellite service. (RR)

EJ--Aeronautical Mobile-Satellite Space Station: A space station in the aeronautical mobile-satellite service. (RR)

EK--Space Tracking Space Station: A space station which transmits or receives and retransmits emissions used for space tracking.

EM--Meteorological-Satellite Space Station: A space station in the meteorological-satellite service. (RR)

EN--Radionavigation-Satellite Space Station: A space station in the radionavigation-satellite service. (RR)

EO--Aeronautical Radionavigation-Satellite Space Station: A space station in the aeronautical radionavigation-satellite service. (RR)

EQ--Maritime Radionavigation-Satellite Space Station: A space station in the maritime radionavigation-satellite service. (RR)

ER--Space Telemetry Space Station: A space station the emissions of which are used for space telemetry.

ES--Inter-Satellite Space Station: A space station in the inter-satellite service. (RR)

ET--Space Operation Space Station: A space station in the space operation service. (RR)

EU--Land Mobile-Satellite Space Station: A space station in the land mobile-satellite service. (RR)

EV--Broadcasting-Satellite Space Station (television): A space station in the broadcasting-satellite service (television). (RR)

EW--Earth Exploration-Satellite Space Station: A space station in the Earth exploration-satellite service. (RR)

EX--Experimental Station: A station utilizing radio waves in experiments with a view to development of science or technique. (RR) (EX is not used on applications.)

FA--Aeronautical Station: A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example on board ship or on a platform at sea. (RR)

FAB--Aeronautical Broadcast Station: An aeronautical station which makes scheduled broadcasts of meteorological information and notices to airmen. (In certain instances, an aeronautical broadcast station may be placed on board a ship.)

FAC--Airdrome Control Station: An aeronautical station providing communication between an airdrome control tower and aircraft.

FAD--Telecommand Aeronautical Station: A land station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.

FAT--Flight Test Station: An aeronautical station used for the transmission of essential communications in connection with the testing of aircraft or major components of aircraft.

FB--Base Station: A land station in the land mobile service. (RR)

FBD--Telecommand Base Station: A land station in the land mobile service the emissions of which are used for terrestrial telecommand.

FC--Coast Station: A land station in the maritime mobile service. (RR)

FCB--Marine Broadcast Station: A coast station which makes scheduled broadcast of time, meteorological, and hydrographic information.

FCD--Telecommand Coast Station: A land station in the maritime mobile service the emissions of which are used for terrestrial telecommand.

FD--Aeronautical Station (R): An aeronautical station in the aeronautical mobile (R) service. (RR)

FG--Aeronautical Station (OR): An aeronautical station in the aeronautical mobile (OR) service. (RR)

FL--Land Station: A station in the mobile service not intended to be used while in motion. (RR)

FLD--Telecommand Land Station: A land station in the mobile service the emissions of which are used for terrestrial telecommand.

FLE--Telemetry Land Station: A land station the emissions of which are used for telemetry.

FLEA--Aeronautical Telemetry Land Station: A telemetry land station used in the flight testing of manned or unmanned aircraft, missiles, or major components thereof.

FLEB--Flight Telemetry Land Station: A telemetry land station the emissions of which are used for telemetry to a balloon; to a booster or rocket, excluding a booster or rocket in orbit about the Earth or in deep space; or to an aircraft, excluding a station used in the flight testing of an aircraft.

FLEC--Surface Telemetry Land Station: A telemetry land station the emissions of which are intended to be received on the surface of the Earth.

FLH--Hydrologic and Meteorological Land Station: A land station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

FLU--Aeronautical Utility Land Station: A land station located at airdrome control towers and used for control of ground vehicles and aircraft on the ground at airdromes.

FP--Port Station: A coast station in the port operations service. (RR)

FX--Fixed Station: A station in the fixed service. (RR)

FXD--Telecommand Fixed Station: A fixed station in the fixed service the emissions of which are used for terrestrial telecommand.

FXE--Telemetry Fixed Station: A fixed station the emissions of which are used for telemetry.

FXH--Hydrologic and Meteorological Fixed Station: A fixed station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

LR--Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion. (RR)

MA--Aircraft Station: A mobile station in the aeronautical mobile service other than a survival craft station, located on board an aircraft. (RR)

MAD--Telecommand Aircraft Station: A mobile station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.

MAP--Portable Aircraft Station: A portable station operating in the aeronautical mobile service.

ME--Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (RR) (ME is not used on applications.)

ML--Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent. (RR)

MLD--Telecommand Land Mobile Station: A mobile station in the land mobile service the emissions of which are used for terrestrial telecommand.

MLP--Portable Land Mobile Station: A portable station operating in the land mobile service.

MO--Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points. (RR)

MOB--Radio Beacon Mobile Station: A mobile station the emissions of which are used to determine its location.

MOD--Telecommand Mobile Station: A mobile station in the mobile service the emissions of which are used for terrestrial telecommand.

MOE--Telemetry Mobile Station: A mobile station the emissions of which are used for telemetry.

MOEA--Aeronautical Telemetry Mobile Station: A telemetry mobile station used for transmitting data directly related to the airborne testing of the vehicle, (or major components), on which the station is installed.

MOEB--Flight Telemetry Mobile Station: A telemetry mobile station used for transmitting data from an airborne vehicle, excluding data related to airborne testing of the vehicle itself, (or major components thereof).

MOEC--Surface Telemetry Mobile Station: A telemetry mobile station located on the surface of the Earth and the emissions of which are intended to be received on the surface of the Earth.

MOH--Hydrologic and Meteorological Mobile Station: A mobile station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

MOP--Portable Mobile Station: A portable station operating in the mobile service.

MOU--Aeronautical Utility Mobile Station: A mobile station used for communication at airdromes with the aeronautical utility land station, the airdrome control station, the FAA flight service station, ground vehicles, and aircraft on the ground. (All transmissions shall be subject to the control of the airdrome control station and shall be discontinued immediately when so requested by the airdrome control operators.)

MR--Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points. (RR)

MRP--Portable Radiolocation Station: A portable station operating in the radiolocation service.

MS--Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station. (RR)

MSD--Telecommand Ship Station: A mobile station in the maritime mobile service the emissions of which are used for terrestrial telecommand.

MSP--Portable Ship Station: A portable station operating in the maritime mobile service.

NL--Maritime Radionavigation Land Station: A land station in the Maritime Radionavigation Service not intended for use while in motion.

NLC--Maritime Radar Beacon (racon) Station: A land station in the maritime radionavigation service which employs a radar beacon (racon).

NLM--Marine Radiobeacon Station: A radiobeacon station in the maritime radionavigation service intended for the benefit of ships.

NR--Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points. (RR)

OD--Oceanographic Data Station: A station in the maritime mobile service located on a ship, buoy or other sensor platform the emissions of which are used for the transmission of oceanographic data.

OE--Oceanographic Data Interrogating Station: A station in the maritime mobile service the emissions of which are used to initiate, modify, or terminate functions of equipment directly associated with an oceanographic data station, including the station itself.

RA--Radio Astronomy Station: A station in the radio astronomy service. (RR) (This is always a receiving station.)

RG--Radio Direction-Finding Station: A radiodetermination station using radio direction-finding. (RR)

RN--Radionavigation Land Station: A station in the radionavigation service not intended to be used in motion. (RR)

RNL--Loran Station: A long distance radionavigation land station transmitting synchronized pulses. Hyperbolic lines of position are determined by the measurement of the difference in the time of arrival of these pulses.

SA--Meteorological Aids Mobile Station: A mobile station in the meteorological aids service intended to be used while in motion or during halts at unspecified points.

SAR--Radiosonde Station: A station in the meteorological aids service employing a radiosonde.

SM--Meteorological Aids Base Station: A land station in the meteorological aids service not intended for use while in motion.

SMB--Radar Beacon Precipitation Gage Station: A transponder station in the meteorological aids service, the emissions of which are used for telemetry.

SMD--Meteorological Radar Station: A station in the meteorological aids service employing radar.

SMRG--Radiosonde Ground Station: A station in the meteorological aids service employing a ground station associated with a radiosonde.

SN--Sounder Network Station: A station equipped with an ionosphere sounder used for the real-time selection of frequencies for operational communication circuits.

SP--Sounder Prediction Station: A station equipped with an ionosphere sounder for real-time monitoring of upper atmosphere phenomena or to obtain data for the prediction of propagation conditions.

SS--Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service. (RR)

TB--Aeronautical Earth Station: An earth station in the fixed-satellite service or in some cases in the aeronautical mobile-satellite service located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service. (RR)

TC--Fixed-Satellite Earth Station: An earth station in the fixed-satellite service. (RR)

TD--Space Telecommand Earth Station: An earth station the emissions of which are used for space telecommand.

TE--Satellite EPIRB Station: A satellite Emergency Position-Indicating Radio Beacon (EPIRB) in the mobile-satellite service (RR).

TF--Radiodetermination-Satellite Earth Station: A fixed earth station in the radiodetermination-satellite service. (RR)

TG--Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship. (RR)

TH--Space Research Earth Station: An earth station in the space research service. (RR)

TI--Coast Earth Station: An earth station in the fixed-satellite service or in some cases in the maritime mobile-satellite service located at a specified fixed point on land to provide a feeder link for the maritime mobile-satellite. (RR)

TJ--Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft. (RR)

TK--Space Tracking Earth Station: An earth station which transmits or receives emissions used for space tracking.

TL--Radiodetermination-Satellite Mobile Earth Station: A mobile earth station in the radiodetermination-satellite service. (RR)

TM--Meteorological-Satellite Earth Station: An earth station in the meteorological-satellite service. (RR)

TN--Radionavigation-Satellite Fixed Earth Station: A fixed earth station in the radionavigation-satellite service. (RR)

TO--Aeronautical Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the aeronautical radionavigation-satellite service. (RR)

TP--Earth Station (receiving): An earth station used for receiving. (RR) (TP is not used on applications.)

TQ--Maritime Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the maritime radionavigation-satellite service. (RR)

TR--Space Telemetry Earth Station: An earth station which receives emissions used for space telemetry.

TT--Space Operation Earth Station: An earth station in the space operation service. (RR)

TU--Land Mobile Earth Station: A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent. (RR)

TW--Earth Exploration-Satellite Earth Station: An earth station in the Earth exploration-satellite service. (RR)

TX--Maritime Radionavigation-Satellite Earth Station: A fixed earth station in the maritime radionavigation-satellite service. (RR)

TY--Base Earth Station: An earth station in the fixed-satellite service or in some cases in the land mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the land mobile-satellite service. (RR)

TZ--Aeronautical Radionavigation-Satellite Earth Station: A fixed earth station in the aeronautical radionavigation-satellite service. (RR)

UA--Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points. (RR)

UM--Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the radionavigation-satellite service. (RR)

VA--Land Earth Station: An earth station in the fixed-satellite service or in some cases in the mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the mobile-satellite service. (RR)

XC--Experimental Contract Developmental Station: An experimental station used for the evaluation or testing under Government contract of electronics equipment or systems in a design or development stage.

XD--Experimental Developmental Station: An experimental station used for evaluation or testing of electronics equipment or systems in a design or development stage.

XE--Experimental Export Station: An experimental station intended for export and used for the evaluation or testing of electronics equipment or systems in the design or development stage.

XM--Experimental Composite Station: An experimental station used in experimental operations of a complex nature not readily specified or used in an operation which is a composite of two or more of the established experimental categories.

XR--Experimental Research Station: An experimental station used in basic studies concerning scientific investigation looking toward the improvement of the art of radiocommunications.

XT--Experimental Testing Station: An experimental station used for the evaluation or testing of electronics equipment or systems, including site selection and transmission path surveys, which have been developed for operational use.

Table of Services, Station Classes, and Stations

Table A is used to determine the proper Station Class (STC) symbol to be used versus the *Service* in which the transmitting station will operate. Frequency bands are allocated to Service(s) based upon the U.S. Government Table of Frequency Allocations.

TABLE A

Table of Services, Station Classes, and Stations

Service	Station Class	Station
1. Amateur	None	Amateur
2. Broadcasting	BC BT	Broadcasting (sound) Broadcasting (television)
3. Broadcasting-Satellite	EB EV	Space (sound) Space (television)
4. Earth Exploration-Satellite	EW TW	Space Earth
<i>Meteorological-Satellite</i>	EM TM	Space Earth
5. Fixed	FX FXD FXE FXH	Fixed Telecommand Fixed Telemetry Fixed Hydrologic and Meteorological Fixed
<i>Aeronautical Fixed</i>	AX	Aeronautical Fixed
6. Fixed-Satellite	EC TC VA TB TI TY	Space Earth Land Earth Earth Coast Earth Base Earth
7. Inter-Satellite	ES	Space
8. Meteorological Aids	SA SAR SM SMB SMD SMRG	Meteorological Aids Mobile Station Radiosonde Meteorological Aids Base Station Radar Beacon Precipitation Gage Meteorological Radar Radiosonde Ground

Service	Station Class	Station
9. Mobile	FL FLD FLE FLEA FLEB FLEC FLH FLU MO MOB MOD MOE MOEA MOEB MOEC MOH MOP MOU	Land Telecommand Land Telemetry Land Aeronautical Telemetry Land Flight Telemetry Land Surface Telemetry Land Hydrologic and Meteorological Land Aeronautical Utility Land Mobile Radio Beacon Mobile Telecommand Mobile Telemetry Mobile Aeronautical Telemetry Mobile Flight Telemetry Mobile Surface Telemetry Mobile Hydrologic and Meteorological Mobile Portable Mobile Aeronautical Utility Mobile
<i>Aeronautical Mobile</i>	FA FAB FAC FAD FAT MA MAD MAP	Aeronautical Aeronautical Broadcast Airdrome Control Telecommand Aeronautical Flight Test Aircraft Telecommand Aircraft Portable Aircraft
<i>Aeronautical Mobile (OR)</i>	FG	Aeronautical
<i>Aeronautical Mobile (R)</i>	FD	Aeronautical
<i>Land Mobile</i>	FB FBD ML MLD MLP	Base Telecommand Base Land Mobile Telecommand Land Mobile Portable Land Mobile
<i>Maritime Mobile</i>	FC FCB FCD MS MSD MSP OD OE	Coast Marine Broadcast Telecommand Coast Ship Telecommand Ship Portable Ship Oceanographic Data Oceanographic Data Interrogating

Service	Station Class	Station
10. Mobile-Satellite	UA TE EI VA	Mobile Earth Satellite EPIRB Space Land Earth
<i>Aeronautical Mobile-Satellite</i>	EJ TB TJ	Space Earth Aircraft Earth
<i>Land Mobile-Satellite</i>	EU TU TY	Space Land Mobile Earth Base Earth
<i>Maritime Mobile-Satellite</i>	EG TG TI	Space Ship Earth Coast Earth
11. Radio Astronomy	RA	Radio Astronomy
12. Radiodetermination	None RG	Radiodetermination Radio Direction-Finding
<i>Radiolocation</i>	LR MR MRP	Land Mobile Portable
<i>Radionavigation</i>	NR RNL RN	Mobile LORAN Land
Aeronautical Radionavigation	AL ALA ALB ALC ALG ALL ALO ALR ALS ALTM ALTO AM AMA	Land Marker Beacon Radio Beacon Radar Beacon (Racon) Glide Path (Slope) Localizer Omnidirectional Range Radio Range Surveillance Radar Land Test (Maintenance) Land Test (Operational) Mobile Altimeter
Maritime Radionavigation	NL NLC NLM	Land Radar Beacon (Racon) Marine Radio Beacon
13. Radiodetermination-Satellite	EF TF TL	Space Earth Mobile Earth

Service	Station Class	Station
<i>Radionavigation-Satellite</i>	EN TN UM	Space Fixed Earth Mobile Earth
Aeronautical Radionavigation-Satellite	EO TO TZ	Space Mobile Earth Earth
Maritime Radionavigation-Satellite	EQ TQ TX	Space Mobile Earth Earth
14. Space Operation	ET TT	Space Earth
15. Space Research	EH TH	Space Earth
16. Standard Frequency and Time Signal	SS	Standard Frequency and Time Signal
17. Standard Frequency and Time Signal-Satellite	EE	Space
18. No Specific Service	DGP ED EK ER SN SP TD TK TR XC XD XE XM XR XT	Differential-Global-Positioning-System Space Telecommand Space Space Tracking Space Space Telemetry Space Sonder Network Sonder Prediction Space Telecommand Earth Space Tracking Earth Space Telemetry Earth Experimental Contract Developmental Experimental Developmental Experimental Export Experimental Composite Experimental Research Experimental Testing

ANNEX B - TABLE OF EMISSIONS DESIGNATORS

1. Table A-B-1 contains the emission classification symbols for use it Data Item 114.

Table A-B-1 - Required Emission Classification Symbols (Page 1 of 2)

First Symbol - Designates Type of Modulation of the Main Carrier	
Unmodulated	
N - Emission of unmodulated carrier	
Amplitude Modulated	
A - Double sideband	
H - Single sideband, full carrier	
R - Single sideband, reduced or variable level carrier	
J - Single sideband, suppressed carrier	
B - Independent sidebands	
C - Vestigial sidebands	
Angle-Modulated	
F - Frequency modulation	
G - Phase modulation	
Amplitude and Angle-Modulated	
D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence	
Pulse	
P - Sequence of unmodulated pulses	
K - Modulated in amplitude	
L - Modulated in width/duration	
M - Modulated in position phase	
Q - Carrier is angle-modulated during the period of the pulse	
V - Combination of the foregoing or is produced by other means	
Combination	
W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse	
Other	
X - Cases not otherwise covered	

Table A-B-1 (Page 2 of 2)

Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier	
0 - No modulating signal	
1 - A single channel containing quantized or digital information, not using a modulating subcarrier. (Excludes time-division multiplex)	
2 - A single channel containing quantized or digital information, using a modulating subcarrier	
3 - A single channel containing analogue information	
7 - Two or more channels containing quantized or digital information	
8 - Two or more channels containing analogue information	
9 - Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information	
X - Cases not otherwise covered	
Third Symbol - Type of Information to be Transmitted^a	
N - No information transmitted	
A - Telegraphy - for aural reception	
B - Telegraphy - for automatic reception	
C - Facsimile	
D - Data transmission, telemetry, telecommand	
E - Telephony (including sound broadcasting)	
F - Television (video)	
W - Combination of the above	
X - Cases not otherwise covered. ^b	
^a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. ^b A full explanation for the selection of the letter X shall be provided in item 520 unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.	

Table A-B-2 - Optional Emission Classification Symbols

Fourth Symbol - Designates the Details of Signal(s)	
A - Two-condition code with elements of differing numbers and/or durations	
B - Two-condition code with elements of the same number and duration without error correction	
C - Two-condition code with elements of the same number and duration with error correction	
D - Four-condition code in which each condition represents a signal element of one or more bits	
E - Multi-condition code in which each condition represents a signal element of one or more bits	
F - Multi-condition code in which each condition or combination of conditions represents a character	
G - Sound of broadcasting quality (monophonic)	
H - Sound of broadcasting quality (stereophonic or quadraphonic)	
J - Sound of commercial quality (excluding categories defined for symbol K and L below)	
K - Sound of commercial quality with the use of frequency inversion or band splitting	
L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal	
M - Monochrome	
N - Color	
W - Combination of the above	
X - Cases not otherwise covered	
Fifth Symbol - Designates the Nature of Multiplexing	
N - None	
C - Code-division multiplex (includes bandwidth expansion techniques)	
F - Frequency-division multiplex	
T - Time-division multiplex	
W - Combination of frequency-division multiplex and time-division multiplex	
X - Other types of multiplexing	

ANNEX C - GEOGRAPHICAL ABBREVIATIONS

This annex contains those abbreviations that will be used in data items 300, 301, 400 401, 530 and 531. The various lists are sorted by the approved code.

UNITED STATES AND POSSESSIONS

50 United States and the District of Columbia

AK	Alaska	MT	Montana
AL	Alabama	NC	North Carolina
AR	Arkansas	ND	North Dakota
AZ	Arizona	NE	Nebraska
CA	California	NH	New Hampshire
CO	Colorado	NJ	New Jersey
CT	Connecticut	NM	New Mexico
DC	District of Columbia	NV	Nevada
DE	Delaware	NY	New York
FL	Florida	OH	Ohio
GA	Georgia	OK	Oklahoma
HI	Hawaii	OR	Oregon
IA	Iowa	PA	Pennsylvania
ID	Idaho	RI	Rhode Island
IL	Illinois	SC	South Carolina
IN	Indiana	SD	South Dakota
KS	Kansas	TN	Tennessee
KY	Kentucky	TX	Texas
LA	Louisiana	UT	Utah
MA	Massachusetts	VA	Virginia
MD	Maryland	VT	Vermont
ME	Maine	WA	Washington
MI	Michigan	WI	Wisconsin
MN	Minnesota	WV	West Virginia
MO	Missouri	WY	Wyoming
MS	Mississippi		

Possession or Commonwealths of the United States (Other than the 50 United States and the District of Columbia)

Caribbean Area

-	Navassa Island
PR	Puerto Rico (including Culebra, Mona, and Vieques)
-	Quita Sueno Bank
-	Roncador Bank (Roncador Cay)
-	Serrana Bank (North Cay, Southwest Cay, Northwest Rocks, Dry Ledge)
-	Serranilla Bank (West Breaker, Beacon Cay)
VI	Virgin Islands (St. Croix, St. John, St. Thomas)

Pacific Area

-	Baker Island
GUM	Guam
HWL	Howland Island

JAR	Jarvis Island
JON	Johnston Island (including Sand Island)
-	Kingman Reef
MDW	Midway (Includes Eastern and Sand Islands)
MRA	(except Guam) Mariana Islands (Formerly Ladrone Islands) (Agrihan, Aguijan, Alamagan, Anatahan, Asuncion, Guguan, Maug, Medinilla, Pagan, Farallon de Pajaros, Rota, Saipan, Sarigan, and Tinian)
PLM	Palmyra Island (Some 50 islands make up the Atoll of Palmyra)
SMA	Samoa (American) (Aunuu, Manua Group [or Islands, i.e., Ofu, Olosega, Tau], Rose Island, Swains Island, Tutuila)
WAK	Wake Island

AREA AND OTHER ABBREVIATIONS

AFR	Africa
ANTR	Antarctica
ARCO	Arctic Ocean
CAM	Central America
CBN	Caribbean
EUR	Europe
FE	Far East (Countries of China, Japan, Korea, Thailand, Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Vietnam and East India)
GLM	Gulf of Mexico
GTLK	Great Lakes (collectively)
INDO	Indian Ocean
LAM	Latin America
LANT	Atlantic Ocean
LERI	Lake Erie
LHUR	Lake Huron
LMIC	Lake Michigan
LONT	Lake Ontario
LSUP	Lake Superior
MED	Mediterranean Sea
OCNA	Oceania
PAC	Pacific Ocean
RCVR	Restricted for use only in Passive Sensor and Radio Astronomy listings
SPCE	Space
US	For US only when transmitting and/or receiving in all 50 United States and the District of Columbia
USA	For use only when transmitting and/or receiving in the 48 Contiguous States of the United States and the District of Columbia (This Excludes Alaska and Hawaii)
USP	For use only when transmitting and/or receiving throughout the US (50 States and District of Columbia), the Commonwealth of Puerto Rico, and the Territories and Possessions (does not include the former Trust Territory of the Pacific Islands)

COUNTRY ABBREVIATIONS

ABW	Aruba
AFG	Afghanistan (Islamic State of)
AFS	South Africa (Republic of)
AGL	Angola (Republic of)
AIA	Anguilla
ALB	Albania (Republic of)
ALG	Algeria (People's Democratic Republic of)
ALS	Alaska (not for use in GMF; for ITU use only)
AMS	Saint Paul and Amsterdam Islands

AND	Andorra (Principality of)
AOE	Western Sahara
ARG	Argentine Republic
ARM	Armenia (Republic of)
ARS	Saudi Arabia (Kingdom of)
ASC	Ascension
ATA	Antartic
ATG	Antigua and Barbuda
ATN	Netherlands Antilles
AUS	Australia
AUT	Austria
AZE	Azerbaijani Republic
AZR	Azores
B	Brazil (Federative Republic of)
BAH	Bahamas (Commonwealth of the)
BEL	Belgium
BEN	Benin (Republic of)
BER	Bermuda
BFA	Burkina Faso
BGD	Bangladesh (People's Republic of)
BHR	Bahrain (State of)
BIH	Bosnia & Herzegovina (Republic of)
BIO	British Indian Ocean Territory
BLR	Belarus (Republic of)
BLZ	Belize
BOL	Bolivia (Republic of)
BOT	Botswana (Republic of)
BRB	Barbados
BRM	Myanmar (Union of)
BRU	Brunei Darussalam
BTN	Bhutan (Kingdom of)
BUL	Bulgaria (Republic of)
CAF	Central African Republic
CAN	Canada
CAR	Caroline Islands
CBG	Cambodia (Kingdom of)
CHL	Chile (except Easter Island)
CHN	China (People's Republic of)
CHR	Christmas Island (Indian Ocean)
CKH	Cook Islands
CLM	Colombia (Republic of)
CLN	Sri Lanka (Democratic Socialist Republic of)
CME	Cameroon (Republic of)
CNR	Canary Islands
COG	Congo (Republic of the)
COM	Comoros (Islamic Federal Republic of the)
CPV	Cape Verde (Republic of)
CRO	Crozet Archipelago
CTI	Cote d'Ivoire (Republic of)
CTR	Costa Rica
CUB	Cuba
CVA	Vatican City State
CYM	Cayman Islands
CYP	Cyprus (Republic of)

CZE	Czech Republic
D	Germany (Federal Republic of)
DGA	Diego Garcia
DJI	Djibouti (Republic of)
DMA	Dominica (Commonwealth of)
DNK	Denmark
DOM	Dominican Republic
E	Spain
EGY	Egypt (Arab Republic of)
EQA	Ecuador
ERI	Eritrea
EST	Estonia (Republic of)
ETH	Ethiopia
F	France
FJI	Fiji (Republic of)
FLK	Falkland Islands (Malvinas)
FIN	Finland
FRO	Faroe Islands
FSM	Micronesia (Federated States of) (Kapingamarangi, Kosrae, Lamotrek, Namonuito, Nukuoro, Oroluk, Pohnpei, Truk, Ulithi, Woleai, Yap)
G	United Kingdom of Great Britain and Northern Ireland
GAB	Gabonese Republic
GCA	Territories of the United Kingdom in Region 1
GCC	Territories of the United Kingdom in Region 3
GDL	Guadeloupe (French Department of)
GEO	Georgia (Republic of)
GHA	Ghana
GIB	Gibraltar
GMB	Gambia (Republic of the)
GNB	Guinea-Bissau (Republic of)
GNE	Equatorial Guinea (Republic of)
GRC	Greece
GRD	Grenada
GRL	Greenland
GTM	Guatemala (Republic of)
GUF	Guiana (French Department of)
GUI	Guinea (Republic of)
GUM	Guam
GUY	Guyana
HKG	Hong Kong
HND	Honduras (Republic of)
HNG	Hungary (Republic of)
HOL	Netherlands (Kingdom of the)
HRV	Croatia (Republic of)
HTI	Haiti (Republic of)
HWA	Hawaii (not for use in GMF; for ITU use only)
I	Italy
ICO	Cocos Keeling Islands
IND	India (Republic of)
INS	Indonesia (Republic of)

IRL	Ireland
IRN	Iran (Islamic Republic of)
IRQ	Iraq (Republic of)
ISL	Iceland
ISR	Israel (State of)
J	Japan (includes Iwo Jima, Marcus Island, Ryu Kyu Islands)
JMC	Jamaica
JON	Johnston Island
JOR	Jordan (Hashemite Kingdom of)
KAZ	Kazakhstan (Republic of)
KEN	Kenya (Republic of)
KER	Kerguelen Islands
KGZ	Kyrgyz Republic
KIR	Kiribati (Republic of)
KOR	Korea (Republic of)
KRE	Democratic People's Republic of Korea
KWT	Kuwait (State of)
LAO	Lao People's Democratic Republic
LBN	Lebanon
LBR	Liberia (Republic of)
LBY	Libya (Socialist People's Libyan Arab Jamahiriya)
LCA	Saint Lucia
LIE	Liechtenstein (Principality of)
LSO	Lesotho (Kingdom of)
LTU	Lithuania (Republic of)
LUX	Luxembourg
LVA	Latvia (Republic of)
MAC	Macao
MAU	Mauritius (Republic of)
MCO	Monaco (Principality of)
MDA	Moldova (Republic of)
MDG	Madagascar (Democratic Republic of)
MDR	Madeira
MDW	Midway Islands
MEX	Mexico
MHL	Marshall Islands (Republic of the) (Ailinglapalap, Arno, Ebeye, Enewetak, Jaluit, Kwajalein, Majuro, Mili, Roi-Namur, Rongelap)
MKD	The Former Yugoslav Republic of Macedonia
MLA	Malaysia
MLD	Maldives (Republic of)
MLI	Mali (Republic of)
MLT	Malta
MNG	Mongolian People's Republic
MOZ	Mozambique (Republic of)
MRA	Mariana Islands (except Guam)
MRC	Morocco (Kingdom of)
MRN	Marion Island
MRT	Martinique (French Department of)
MSR	Montserrat
MTN	Mauritania (Islamic Republic of)
MWI	Malawi
MYT	Mayotte Island

NCG	Nicaragua
NCL	New Caledonia
NFK	Norfolk Island
NGR	Niger (Republic of the)
NIG	Nigeria (Federal Republic of)
NIU	Niue Island
NMB	Namibia (Republic of)
NOR	Norway
NPL	Nepal
NRU	Nauru (Republic of)
NZL	New Zealand
OCE	French Polynesia
OMA	Oman (Sultanate of)
PAK	Pakistan (Islamic Republic of)
PAQ	Easter Island (Chile)
PHL	Philippines (Republic of the)
PHX	Phoenix Islands
PLM	Palmyra Island (some 50 islands make up the Atoll of Palmyra)
PLW	Palau (Republic of)
PNG	Papua New Guinea
PNR	Panama (Republic of)
POL	Poland (Republic of)
POR	Portugal
PRG	Paraguay (Republic of)
PRU	Peru
PTC	Pitcairn Island
PTR	Puerto Rico (including Culebra, Mona, and Vieques) (not for use in GMF; for ITU use only)
QAT	Qatar (State of)
REU	Reunion (French Department of)
ROD	Rodriguez
ROU	Romania
RUS	Russian Federation
RRW	Rwandese Republic
S	Sweden
SCN	Saint Christopher and Nevis
SDN	Sudan (Republic of the)
SEN	Senegal (Republic of)
SEY	Seychelles (Republic of)
SHN	Saint Helena
SLM	Solomon Islands
SLV	El Salvador (Republic of)
SMA	American Samoa
SMO	Western Samoa (Independent State of)
SMR	San Marino (Republic of)
SNG	Singapore (Republic of)
SOM	Somali Democratic Republic
SPM	Saint Pierre and Miquelon (French Department of)
SRL	Sierra Leone
STP	Sao Tome and Principe (Democratic Republic of)
SUI	Switzerland (Confederation of)

SUR	Suriname (Republic of)	
SVK	Slovak Republic	
SVN	Slovenia (Republic of)	
SWN	Swan Islands	
SWZ	Swaziland (Kingdom of)	
SYR	Syrian Arab Republic	
TCA	Turks and Caicos Islands	
TCD	Chad (Republic of)	
TGO	Togolese Republic	
THA	Thailand	
TKL	Tokelau Islands	
TJK		Tajikistan (Republic of)
TKM	Turkmenistan	
TMP	East Timor	
TON	Tonga (Kingdom of)	
TRC	Tristan da Cunha	
TRD	Trinidad and Tobago	
TUN	Tunisia	
TUR	Turkey	
TUV	Tuvalu	
TZA	Tanzania (United Republic of)	
UAE	United Arab Emirates	
UGA	Uganda (Republic of)	
UKR	Ukraine	
URG	Uruguay (Eastern Republic of)	
USA	The 48 contiguous States of the United States of America and the District of Columbia (excludes the States of Alaska and Hawaii)	
UZB	Uzbekistan (Republic of)	
VCT	St. Vincent and the Grenadines	
VEN	Venezuela (Republic of)	
VIR	United States Virgin Islands (St. Croix, St. John, St. Thomas) (not for use in GMF; for ITU use only)	
VRG	British Virgin Islands	
VTN	Viet Nam (Socialist Republic of)	
VUT	Vanuatu (Republic of)	
WAK	Wake Island	
WAL	Wallis and Futuna Islands	
YEM	Yemen (Republic of)	
YUG	Yugoslavia (Federal Republic of)	
ZA1	Zaire (Republic of)	
ZMB	Zambia (Republic of)	
ZWE	Zimbabwe (Republic of)	

ANNEX D - MANUFACTURER CODES

This annex contains those manufacturer codes that will be used as part of the data entered in data items 340,345,440 or 445.

ASP	A/S S.P. Radio
AHS	A. H. Systems, Inc.
ARD	A.R. & D. Co.
AAC	AACOMM Inc.
AAN	AANDERAA Instruments
ABC	AB Net Corp.
ABA	ABA Electronics Mechanical System
ACS	AC Sparkplug Co.
ACC	ACE Communications
ACN	ACE R/C Inc.
ACL	ACR Electronics
ACR	Acrodyne or Acrodyne Industries Inc.
ADU	ACS (Advanced Communications System Inc.)
ADR	Adams Russel
ACO	Adcole Corp.
ADD	Addison Industries Ltd.
ADL	Adler Electronics Co. or Adler Educational Systems Division
ADM	Admiral Corp.
ADI	Advance Communications Inc.
ALI	Advance Devices Lab. Inc.
AVS	Advanced Countermeasures Systems
ADE	Advanced Electromagnetic Inc.
ADC	Advanced Electronics
ATE	Advanced Tech Talk
ATF	Advanced Techcom Inc.
ATN	Advanced Telemetry International
ATS	Advanced Telemetry Systems, Inc.
ATX	Advanced Training Systems
ADT	Advanced Videotech Corp.
AEA	AEA Electronic LTD
ASQ	AEI: Electronics Ltd. or Associated Electrical Industries
ADF	AEL Defense Corporation
AMC	Aeornca Manufacturing Corp.
AEO	Aer-O-Com
AED	Aero Electronics Development
AGA	Aero Geo-Astro Corp.
ARW	Aero Wave
ADY	Aerodyne
AJE	Aerojet Electosystems
AJT	Aerojet Precision Weapons Co.
ACE	Aeronautical Communications Equipment Inc.
AER	Aeronautical Electronic Inc.
ARJ	Aeronautical Radio Inc. or ARINC
ANF	Aeronutronic Ford
AES	Aerosonic Corp.
ARI	Aerospace Research Inc.
ARN	Aerotron, Inc.
AVN	Aerovironment
AET	Aertech Inc.

AGN	AGA Navigation Aids Limited
AIN	Ainslie Corp.
AOC	Air Associates Co.
AOM	Air Comm Electronics
ACI	Air Communications Inc.
AAL	Air Force Avionics Lab
AFL	Air Force Lab Built
AIS	Air Science Inc.
ASW	Air Target Sweden
AIL	Airborne Instrument Laboratories
ACA	Aircraft Accessories Corp.
AAI	Aircraft Armaments Inc.
AMR	Aircraft-Marine Radio Corp.
APD	Aircraft Products Co.
ARC	Aircraft Radio Corp.
AIE	Aire-Sciences, Inc.
AIR	Aireon Manufacture Corp.
AIO	AIRONET
AYI	Airport Systems International, Inc.
ATR	Airtronics Inc.
ALA	Alakai Electronics
AAM	Alascom Inc.
ACT	ALCATEL
ALM	Alcom Limited
ALD	Alder Electronics Inc.
ALN	Alenia Spazio
ALP	Aleph Inc.
AHI	Aleth Inc.
ALF	Alford Manufacturing Co.
ALE	Alfred Electronics
ALO	Alineco
APC	All Products
ACW	Allen D. Cardwell Co.
AOA	Allen Osbourne Associates, Inc.
ALG	Allgon Antenna AD
AEC	Allied Electronics Corp.
ART	Allied Radio Shack
ASG	Allied Signal Commercial Aviation System
ALL	Allison Electronics
AIA	Alpha Industries, Inc.
AMQ	Als Marine Radio
ALT	Altech Lansing
ASI	Alto Scientific Inc.
ALU	Aluma Tower Co.
ALV	Alva Radio Industries
ABR	Amber Electro Design, Inc.
AMT	Amcor
AMD	AMD Electronics
AME	AMECO Equipment Corp.
AMI	Amecom Division
ATI	Amerasia Technology Inc.
AEL	American Electric Laboratories Inc. or American Electronic Laboratories
ALS	American Laser Sys Technology
AMF	American Machine and Foundry Co.
AMN	American Nucleonics Corp.

AMO	American Optical Corp.
AMS	American Systems
ATT	American Telephone & Telegraph
ATD	American Training Aid
AEX	Amex Systems, Inc.
AMH	Amherst Systems, Inc.
AMX	Ampex Corp.
AMP	Amphenol Canadian Ltd. or Amphenol Dist. Division
ARR	Amplifier Research Corp.
ANN	Anderson Lab
ANA	Andrew Antenna Corporation Ltd.
ANC	Andrew California Corp.
AND	Andrew Corp.
AXM	Anixter-Mark
ANM	Anram Electronics
ANI	Antac Industries, Inc.
ATH	Antech Corp.
ANE	Antenna Electronics Co.
ANL	Antenna Laboratories Inc.
ANP	Antenna Products Co.
ANR	Antenna Research Associates
ANS	Antenna Specialists Co.
ASY	Antenna Systems Inc.
ATG	Antenna Technology Communications, Inc.
AFC	Antennas for Communications
ANY	Any & Company Ltd.
ANZ	Anzac Industries
AOR	AOR, Ltd.
APE	Apelco or Applied Electronics Co.
APO	Apollo Manufacturing Co.
APP	Applied Communications
ABB	Applied Communications, Division of Amstar
APV	Applied Devices Corp.
AEM	Applied Electro Mechanics, Inc.
ALC	Applied Research Corp.
API	Applied Research, Inc.
APA	Applied Specialities Inc.
APS	Applied Systems Engineering
APT	Applied Technology
ARF	ARF Products, Inc.
ARK	Arkay International Inc.
ANT	Arnet
ARA	ARTAIS Inc.
ARB	Artars Inc.
ARX	ARTEX Inc.
ARV	Arvin Industries Inc.
ASA	Asahi Optical Co.
ASN	Aselsan
ARS	Associated Radio Service Co.
ASE	Astral Electronics Inc.
AST	Astro Communication Laboratories or Astaron Electronics Ltd.
ATC	Astro Telecom Corp.
ASM	Astromarine Products Corp.
ASU	Astronautics of America
ASC	Astronomics Corp.

ATA	Atacs Corp.
ATB	ATCI Antennas
ARL	Atir Limited
AAE	Atlantic Aerospace Electronics Corp.
ATL	Atlantic Instrument & Electronics Inc.
ARE	Atlantic Research Corp.
All	Atmospheric Instrument Research, Inc.
AIC	Atmospheric Instrumentation Research Corp.
AID	Audio Intelligence Devices Inc.
AUD	Audio-Sine, Inc.
ADV	Audio-Vac
AVX	Audiovox
AUA	Austin Custom Antennas
AUM	Austin Microwave
AUS	Austron
ATM	Automation Inc.
AUT	Autonetics
AUP	AUTOPHON
ATO	Autotape
AUR	Autronics
AVK	Avantek
AVA	Avanter Inc.
AVC	Avco Corp.
AEP	Aviation Electric Pacific Ltd.
AEI	Avion Electronics Inc.
AVI	Avitron Inc.
AVM	AVM Instrument Co.
AVT	Avtek Co.
AYD	Aydin
AZD	Azden Inc.
BKM	B-K Manufacturing Co.
BCA	Babcock Aerospace
BAB	Babcock Electronics Corp.
BAI	Baird Corp.
BLS	Balise
BRL	Balistic Research Laboratory
BAA	Ball Aerospace
BAL	Ball Brothers
BWI	Barker Williamson
BAR	Barrett Electronics
BAC	Barry Research Corp.
BTX	Bartex, Co.
BAE	Barth Engineering & Mfg. Co.
BAS	Bauer Electronic Manufacturing Co.
BAU	Bauer Electronics Corp.
BAY	Bayside Electronics Co.
BEI	Bayside Electronics Inc.
BDM	BDM Corp.
BEB	Beckman/Berk
BEC	Beckman Instruments Inc.
BEE	Beech Aircraft Corp.
BEM	Belair Electronic Laboratory
BHC	Bell & Howell Communications Co.
BLH	Bell Helicopter Textron Inc.

BEL	Bell Telephone
BRC	Belmont Radio Corp.
BCO	Benco TV Associates Ltd. Canada
BTA	Benco TV Associates Ltd.
BEN	Bendix Corp. or Bendix Aviation Corp.
BEG	Bendix/King Mobile Communications
BMR	Benmar
BNM	Benmar Division of Computer Equipment
BNR	Benrad Inc.
BWC	Benrus Watch Co.
BED	Berkeley Division of Beckman Instruments Inc.
BER	Bertea Products or Bertea Corporation
BET	Beta Co.
BUK	Beukers Co.
BDS	Bidirectional Microwave Systems
BIG	Biggs Associates Inc.
BIO	Biocom Inc.
BIR	Bird Electronic Corp.
BII	Bison Instruments Inc.
BIT	BITRO
BKG	BKM Electronics
BLA	Blau-Knox Co.
BTL	Blonder Tongue Laboratory Inc.
BLU	Bludworth or Bludworth Marine Division
BOA	Boeing Aerospace
BOE	Boeing Aircraft
BOP	Bogan-Presto
BCD	Bogen Comm Division Lear Siegler
BON	Bonner Specialties
BZR	Bonzer Inc.
BOT	Boonton Electronics Corp.
BRA	BR Communications
BRE	Brelonix Inc.
BRI	Bristol Aerospace Ltd.
BAP	British Aerospace Public, Ltd.
BCC	British Communications Corp.
BSC	British Standard Cable Co.
BTH	British Thompson Houston, Ltd.
BRT	Broadcast Electronics
BMS	Broadcast Microwave Services
BRD	Broadcomm
BRO	Browning Communications Associates
BLI	Browning Laboratories Inc.
BBR	Brubaker Mfg. Co., Inc.
BRU	Brunswick Co.
BUD	Budelman Electronics Corp.
BRW	Bunker Ramo World Services Corp.
BJH	Bunnell J.H. Co.
BTI	Burle Technologies, Inc.
BUR	Burton Instrumentation Inc.
BUT	Butler National Corp.
CWR	C.W. Radiation Co.
CBW	Cable Waves
CAD	Cadre Division of Amphenol

CFM	California Microwave
CLT	California Technology
CLN	Calspan Corp.
CMB	Cambridge Consultants
CFD	Camfield Mfg. Co.
CIA	Campatnia Industrial Aerospace
CAB	Campbell Manufacture Company Ltd.
CAA	Canadian Arsenals Ltd.
CAE	Canadian Aviation Electronics
CGE	Canadian General Electric Co. or Canadian GE Company Ltd.
CAM	Canadian Marconi
CMO	Canadian Motorola
CAR	Canadian Radio Corp.
CAT	Canadian Telephone Co.
CAW	Canadian Westinghouse
CNN	Cannon Electronics
CAN	Canoga Electronics Corp.
CNY	Canyon Communications Corp.
CAH	Capehart Corp.
CDN	Cardian Electronics
CCC	Cardion Communications Corp.
CDW	Cardwell Mfg. Co.
CCK	Carlson Communication Inc.
CRY	Carry Phone Corp.
CTP	Carterphone Communications
CRT	Cartwright Electronics, Inc.
CWI	Cartwright, Inc.
CVL	Carvill International Corp.
CTR	Cattron, Inc.
CBM	CBM Electronics
CCA	CCA Electronics Corp.
CEO	Celesco Industries
CLW	Celwave Systems
CER	Centry Research Corp.
CME	Century Metal Parts Corp.
CAC	Cessna Aircraft Co.
CET	CETEC Vega
CHE	Challenger Electronics Corp.
CHV	Chance Vought Aircraft Corp.
CHA	Channel Master Corp.
CHK	Checker Electronics Corp.
CES	Checkpoint Systems, Inc.
CHL	Chelton Inc.
CTN	Chemrad Tennessee Corp.
CHT	Chester Electronics
CHD	Childs
CNA	China Electronic Import and Export Corp.
NRN	China North Industries Corp.
CHR	Chris Craft Corp.
CHU	CHU Associates
CIN	Cincinnati Electronic Corp.
CIR	CIR Industries
CSR	Citizen Ship Radio Corp.
CIT	Citizens Radio Corp.
CLM	Clairmonte Industries

CLI	Clark Instrument Co.
CLD	Clegg Division of International Signal & Control
CLE	Clegg Laboratories, Division of Squires-Saunders Inc.
CEI	Cleveland Electronics Inc.
CED	Cleveland Electronics Inc.
CMI	CMI Inc.
CCF	Coastal Climate Company
CBR	Cober Electronics Inc.
COB	Cobra
COH	Cochran
CDR	Codar Ocean Sensors
CCR	Coherent Radiation Co.
COL	Collins Radio Co.
CRC	Collins Radio of Canada
CRR	Colonial Radio Corp.
CEL	Colorado Electronics
CCO	Colt Communications Corp.
CBC	Columbian Bronze Corp.
CHI	Columbian Hydronxonics Inc.
CEC	Columbus Electronics Corp.
CNE	Com/Nav Electronics
CRE	Comaire Electronics
CNT	Comant
CCE	Comelit Compagnia Electronics
CRB	Commercial Resources Communications
CAI	Communication Associates Inc.
COC	Communication Co.
COE(CEI)	Communication Electronics Co.
CEE	Communication Equipment and Engineering Co.
COA	Communication Specialities
CAP	Communications Applied Technology
CCI	Communications Carriers, Inc.
CCJ	Communications Co., Inc.
CCM	Communications Components Corp.
CUC	Communications Devices Co.
CEN	Communications Engineering Co.
CII	Communications Industries Inc.
CML	Communications Measurement Laboratory
COP	Communications Products Co.
CSS	Communications Satellite Corp.
CSP	Communications Specialists
CMT	Communitronics
CMU	Communitronics Ltd.
CPD	Compudyne Corp. EWQI Division
CPA	COMPUTALERT
CDB	Computing Devices Co.
COM	Comrex
CMR	COMSAT, RSI
COI	Comtech Lab, Inc.
CMW	Comwave
CWE	COMWAVE
CRP	Concord Electronics Corp.
COD	Conductron Corp.
CNC	Conic Corp.
CNR	Conifer

CTT	Connecticut Telephone & Electric
CDI	Consultants and Designers Inc.
CCH	Consultants Choice Inc.
CCP	Continental Electric Corporation
CON	Continental Electronics Ltd.
CEM	Continental Electronics Manufacturing Co.
COR	Continental Radio
CTM	Continental Microwave and Tool Co.
COT	Contraves AG
CNI	Contraves Italiana
CCB	Control Chiefs, Inc.
CDC	Control Data Co.
CCD	Control Industries
CLC	Control Laser Corp.
CSI	Control Science Inc.
CVR	Convair
CKC	Cook Communications Corp.
COK	Cook Electric Co.
CAL	Cornell Aeronautical Laboratories Inc.
COO	Coro Metrics Medical Industries
CMS	Cosmos Industries
COS	Cosser Electronics
CIL	Cossor Instruments Ltd. (UK) or Cossor Electronics Ltd.
COU	Courier Communications Inc.
CRA	Craig System Inc.
CRF	Crofs Electric Co.
CRO	Crosley
CRH	Crouse-Hinds
CRN	Crylarm
CSA	CSI Electronics
CTA	CTA Space Systems
CTC	CTI Corp.
CUB	Cubic Co.
CIC	Cubic Industrial Corp.
CUL	Culbertson Industries Inc.
CUR	Curtis Wright Corp.
CUS	Cush Craft
CUM	Custom Electronic Manufacturing Co.
CSC	Customs Signal Corp.
CUT	Cutler Hammer Inc. or AIL Division of Cutler Hammer
CYB	Cyber Mation
CYT	Cybernet International, Inc.
CYL	Cylink Corporation
DAG	Dage Electric Co.
DAV	Dalmo Victor Co.
DAN	Daniels Electronics Limited
DAM	Danmar
DAR	Dare Inc.
DAT	Data Control Systems
DMI	Data Marine International
DPR	Data Products Inc.
DRK	Data Radio Corp.
DTS	Data Transmission Science, Inc.
DTW	Datawell

DTM	Datum
DVT	Dav-Tron Co.
DAE	Davco Electronics Inc.
DOP	Davidson Optronics
DVS	Davis Co.
DAY	Daystrom Inc.
DAP	Dayton Aircraft Products Inc.
DGI	Dayton Granger Inc.
DSI	Daytron Systems Inc.
DBM	3 DBM Systems
DCF	DCF Systems Ltd.
DBS	De Bernardi
DEB	DEBEG-GMBH
DCE	Decatur Electronics, Inc.
DNS	Decca Navigator Systems Inc.
DRI	Decca Radar Inc.
DEA	Decca Radar Ltd. UK
DEC	Decibel Products Inc.
DCI	Defense Communications Engineering Inc.
DEI	Defense Electronics
DSY	Defense Systems Inc.
DEF	Deferral
DMT	Defiance Machine Tool Co.
DLN	Del Norte
DNT	Del Norte Technology Inc.
DCM	Delcom
DFN	Delfin
DFL	Dell Space Star
DLF	Dell Space Star
DEL	Delmar Engineering Laboratories
DES	Delstar Corp.
DEM	Demco Electronics
DLB	Denrolab
DER	Dentron Radio Corporation
DRD	Dero Research Development Corp.
DRG	Deskin Research Group
DET	Detroit Bullet Trap Co.
DEV	Develco Inc.
DEW	Dewey GC Inc.
DJH	Dewitt, John H.
DHV	DHV Inc.
DIC	Diamond Antenna-Microwave Co.
DIL	Diamond Laboratories
DJC	Dickey-John Corp.
DIE	Dielectric Products Engineering Company Inc.
DMC	Digital Microwave Corp.
DIG	Digital Radio
DIT	Digitize, Inc.
DIM	Dimick Manufacture Corp.
DIR	Direction Corp.
DIV	Divco Wayne Corp.
DVR	Diversitel Communications Inc.
DIX	Dixon Industries Corp.
DNE	DNE Technologies, Inc.
DOE	Domestic Radio

DOI	Domino, Inc.
DOL	Doolittle Radio Inc.
DAD	Door Alarm Devices Corp.
DOS	Doresett Electronics Division (Labarge, Inc.)
DOM	Dorne Margolin Inc.
DOR	Dorsett Laboratories
DOU	Douglas Aircraft
DGR	Douglas Randall Div. of W.K. Radio Alarm Box
DOW	Dow Chemical Co.
DRA	Drake RF Co.
DRS	Dressler Engineering Inc.
DRP	DRS Precision Echo Inc.
DSC	DSC Communications
DMR	Dubose Marine Radio
DUB	Dubrow Development Co.
DUT	Duelatron
DLA	Dumont Division of Ling Altec Inc.
DUM	Dumont Laboratories or Dumont, Allen B. Laboratories Inc.
DYM	Dymec
DMD	Dyna Magnetic Devices
DYR	Dynair Electronics
DLC	Dynalab Corp.
DYA	Dynalec Corp.
DYC	Dynamic Communications
DYS	Dynascan Corp.
DYN	Dynatronics Inc.
ESY	E-Systems
EAG	Eagle-Picker Industries Inc.
EAT	Eagle Technologies Inc.
EAR	Earmark, Inc.
EAK	Easker
EAS	Eastern Industries Inc.
EMW	Eastern Microwave Corp.
ECL	Eaton Corp. AIL DIVN.
EBC	EB Corp.
EBN	EB-Nera
ETR	Ecatek
ETK	Ecatek Inc.
ECC	ECI Telecom LTD
ECO	Econolite
ECR	EDCOR
EDI	Edison Pageitalia
EDL	Edler Industries
EDR	EDO Aire
EDO	EDO Corp.
EEB	EEB (Electronic Equipment Bank)
EER	EER Systems
EFD	EF Data
EEI	EICO Electronics Instruments Co.
EIT	Eitel Electronics
EIM	Eitel McCullough Inc. (EIMAC)
EKP	EK Products Inc.
ELD	Eldico Electronics
ELO	Eldorado Electrodata

ELI	Electrac Inc.
EST	Electric Service Co.
EVC	Electric Voice Corp.
EDA	Electro Data Inc.
EMA	Electro Magnetic Sciences Co.
EMR	Electro Mechanical Research Inc.
EMH	Electro-Mechanics Co.
EOS	Electro Optical Systems
ELR	Electrofab
ELF	Electrofact NV
EGD	Electrogarde, Inc.
ELB	Electrolab
ETC	Electromagic Technology Corp.
EMP	Electromagnetic Processes, Inc.
ELS	Electromagnetic Sciences, Inc.
ESL	Electromagnetic Spectrum Laboratory
EIP	Electromatic, Inc.
EMS	Electrometrics
ELE	Electron Corp.
EDC	Electronic Development Corp.
EDZ	Electronic Devices Corp.
EEC	Electronic Engineering Co.
ELL	Electronic Laboratories Ltd.
ELM	Electronic Material International Ltd.
ENC	Electronic Navigation Corp.
ENI	Electronic Navigation Instruments
ESQ	Electronic Signal Products
ESP	Electronic Speciality Co.
ESS	Electronic Support Systems, Inc
ESE	Electronic System Technology
ETS	Electronic Systems Technology
EMD	Electronics & Manufacturing Co.
ECI	Electronics Communications Inc.
ELC	Electronics Concepts Inc.
EMC	Electronics Missiles Communications Inc.
ERI	Electronics Research Industries
ECT	Electrotape
ELT	Electrotechnic Corp.
EES	Elisra Electronics System, Ltd.
ELA	Ellason
EOI	Elmer (Italy)
EAI	Elta-Ashdod Israel
ELU	Elts Unlimited Inc.
EII	EMC Instrument Co.
EEE	EMCEE, Co.
EMB	Emergency Beacon Corp.
EEL	Emerson Electric Co.
EME	Emerson Research Labs
ERD	Emhiser Rand
ERX	Emhiser Research Inc.
EMI	EMI-Cossor Electronics Ltd. or EMI Marine Division
EML	EMI Electronics Ltd.
EMT	EMR (Sangamo Weston, Inc.)
ENA	ENAC/Triton Corp.
ECM	Encomm Inc.

END	ENDECO
ESI	Energy Systems Inc.
EGX	Energy-Onix
ENG	Engineering Services
ETE	Enterprise Electronics Inc.
EDE	Environment Development Corp.
EPS	EPSCO Inc.
ERP	Erapsco
ERC	ERCO Radio Laboratories
ERN	Erichson
ERA	Ericsson, L.M. Ltd.
EGG	Ernst, Grier Germerhausen Co.
ESC	ESCO
ESD	ESL Inc.
ESM	Espey Manufacturing Co.
ESN	Espey Mfg Electronics
ESR	Esterline
EKA	Eureka Sys Inc.
EUU	European Antennas
ESG	Eurosattelite GMBH
EXE	Executive Communications
EXT	Executone Inc.
EXI	EXICOM New Zealand Limited
EYR	Eyring Research Institute
FHM	F & H Manufacturing Corp.
FAM	F & M Electronics
FFE	F-F Electronics
FGE	F. G. Engineering
FWC	F.W. Carpenter Manufacturing Co.
FCM	Fairchild Camera and Instruments
FAC	Fairchild Engineering Corp.
FAI	Fairchild Stratos
FAN	Fannon
FAG	Fargo Co.
FEC	Farinon Electric
FMI	Farinon Microwave
FAR	Farnsworth TV Radio
FAA	Federal Aviation Administration
FCC	Federal Communication Corp.
FSS	Federal Sign and Signal
FSR	Federal Signal Radio
FET	Federal Telegraph Co.
FED	Federal Telephone Radio Corp.
FEM	FEMCO Inc. or Femco Div. Gulton Industries
FER	Ferguson Communications Inc.
FIB	Fibercom
FIG	Figgie International
FIL	Filmdex Corp.
FCO	FINCO
FIN	Finney Co.
FRL	Fisher Research Laboratory Inc.
FLA	Flam and Russell
FLL	Flight Refuel, Ltd.
FLR	Flir Systems Inc.

FLT	Flite-Tronics
FEI	Florida Communications and Electronics Inc.
FLO	Flotronic Products Inc.
FON	Fontek
FAS	Ford Aerospace Corp.
FOR	Fort Worth Tower Co.
FOS	Foster Airdata Systems Inc.
FAP	Fran Air Products Co.
FRA	Francis Industries, Inc.
FAL	Frant, Alan I.W.
FRV	Fraser-Volpe
FEL	Frequency Engineering Laboratories
FSI	Frequency Source, Inc.
FUE	Fuchs Electronics
FUJ	Fujitsu Tem Corp. of America
FUR	Furuno
FUT	Futaba
GLR	G&L Marine Radio
GAB	Gabriel Corp.
GEI	Galaxy Electronics Inc.
GMS	Galaxy Micro Systems Inc.
GAM	GAM Electronics Inc.
GAW	Gamewell Division of Gulf & Western
GAR	Garrett Manufacturing Ltd.
GAD	Gates American Corp.
GAT	Gates Radio Co.
GEC	GEC Telecommunications Ltd.
GEM	Gem Marine Products
GTS	Gemtronics
GEV	Genave
GAC	General Atronics Corp.
GAE	General Aviation Electronics
GAP	General Avionics
GBC	General Bronze Corp.
GDC	General Development Corp.
GDE	General Dynamics/Electronics
GEN	General Electric Corp.
GEE	General Electric England
GEL	General Electronics Laboratories Inc.
GIC	General Instrument Corp.
GMI	General Microwave Corporation
GME	General Microwave Services
GMC	General Motors Corp.
GPI	General Precision Inc. Ltd. (UK)
GPL	General Precision Laboratories or Singer-General Precision Inc.
SGR	General Precision Laboratory Inc.
GRC	General Radio Co.
GRT	General Radiotelephone Co.
GSE	General Service Engineering
GEP	Genesys Systems
GSS	Geo Space Systems Inc.
GDN	Geodynamics Corp.
GEO	Geodyne Corp.
GOM	Geomation

GIT	Georgia Institute of Technology
GOT	Geotel Development
GHH	GH Harlow, Inc.
GIB	Gibson Antennas
GIL	Gilfillan Bros Inc.
GIM	Gimeni III
GLB	GLB Electronics, Buffalo, N.Y.
GYE	Glenayre
GLO	Globe Industries
GDI	Godfrey Engineering Inc.
GON	Gonset Corp. or Gonset Division of Aerotron or Dumont Division of Gonset
GOA	Goodyear Aerospace Corp.
GOU	Gould Inc.
GAL	Granger Associates Ltd.
GRA	Granger Associates or Bauer Broadcast Division of Granger
GTC	Granite Telecom Corp.
GNT	Grant Applied Physics
GRY	Gray Radio Company Inc.
GRR	Green Mountain Radio Research
GRO	Ground Data Corp.
GRU	Gruen Watch Co.
GAS	Grumman Aero Space Corp.
GTL	GTE Lenkurt
GTP	GTE Products Corp.
GTE	GTE Sylvania: See Also Sylvania
GUD	Gudeman Co.
GUL	Gulton
GII	Gulton Industries Inc.
GYR	Gyrodyne Co.
HRM	H.R. Smith
HCC	Hal Communications
HSA	Hallands Signal Attaraten
HAL	Hallicrafter Co.
HAI	Hallmark Instruments Inc.
HSD	Halstead
HUA	Hamilton Standard Division-United Aircraft
HAM	Hammarlund Manufacturing Co. or Dumont Division of Hammarlund
HMT	Hamtronics
HTI	Hamtronics Inc.
HAN	Handar Company
HAE	Harbor Electronics
HES	Harbor Electronics Services
HAK	Harkins Radio
HAD	Harris Aerospace Systems Divn.
HAC	Harris Corp.
HFI	Harris Farinon Inc.
HIC	Harris Intertype Corp.
HJH	Harrison, John H.
HDL	Harry Diamond Lab.
HME	Hartman Marine Electronics Corp.
HMC	Hartman Marine Equipment Corp.
HSY	Hartman Systems (Div. of ATO)
HAR	Harvey Radio Laboratories Inc.
HAS	Hastings Raydist Inc.

HSC	Hawkeye Systems Corp.
HAY	Hays Corp.
HAZ	Hazeltine Corp.
HEA	Heath Co.
HEC	Hecules Defense Electronics Systems
HMK	Heimark Electronics Laboratory
PFI	Heinz Pfitzner
HRS	Hendy Radio Service
HEN	Hendys Two Way Radio Service
HKL	Henitz & Kaufman Ltd.
HRC	Henry Radio Co.
HMS	Herley Microwave Systems
HER	Hermer Electronics Ltd.
HEP	Hewlett Packard
HIQ	HI-Q Electronics Inc.
HIT	Hittite Microwave
HMI	HM Electronics, Inc.
HOB	Hobby Lobby International
HOF	Hoffman Electronics Corp.
HLI	Holobeam Laser, Inc.
HON	Honeywell
HOR	Horizon
HAP	Hornet Antenna Products Co.
HDS	Household Data Services, Inc.
HOU	Houston Corp.
HRB	HRB Singer Inc.
HTS	HT Systems
HUD	Hudson American
HUG	Hughes Aircraft Co.
HTC	Hughes Tool Co.
HUL	Hull Electronics Co.
HUN	Huntley
HYE	Hy-Gain Electronics Corp.
HYB	Hybrid Network Inc.
HSS	Hydro Space Systems
HYG	Hygain Antenna Products
HYT	Hytel Corp.
HYN	Hytenna
ICM	ICOM
IDE	IDC Electronics
IDI	Identification Devices, Inc.
IEC	IEC Electronics Corp.
IIT	IITRI
IKE	Ikegami Electric Co.
IFD	In Flight Devices Corp.
BHA	India Bharat
ITH	Indiana Technical Corp.
ICS	Industrial Comm Systems
IND	Industrial Radio Corp.
ISS	Information Station Specialist
INL	Inland Communications Inc.
INO	Inovonics Corporation
IFR	Instrument Flight Research Corp.
IWI	Insulated Wire, Inc.

INE	Intech Inc.
III	Intellitech Industries Inc.
IEI	Intercontinental Electronics, Inc.
INM	Intermic
IAL	International Aeradio Ltd.
IBM	International Business Machine Co.
ICO	International Corp.
ILS	International Laser Systems, Inc.
IMC	International Microwave Corp.
IMM	International Mobile Machine, Inc.
IMT	International Mobile Telephone Systems
IRE	International Radio Electronics Corp.
ISC	International Signal and Control
ISE	International Standard Electric Corp.
ISY	International Systcoms Ltd.
ITP	International Telephone & Telegraph Corp. or ITT Industrial Products
INV	Internav Ltd.
INT	Interstate Electronics Co.
IOT	Interstate Oil Transport Co.
INC	INTRAC
INR	Intrelex Inc.
ISD	ISC Defense Systems
IRC	Islip Radio Corp.
IAI	Israel Aircraft Industries, Ltd.
ITA	ITA Electronic Corp.
ITR	Itek Corp.
ITI	ITI Electronics Inc.
ITO	ITT Aerospace/Optical
ITV	ITT Avionics
ITD	ITT Decca Inc.
ITF	ITT Defense Communications
ITB	ITT Electron Tube Division
ITT	ITT Federal Laboratories
ITG	ITT Gilfillan
ITK	ITT Kellogg Communication System
ITM	ITT Mackay Marine
IMA	ITT Mobile Communications
ITS	ITT Standard
ITC	ITT Telecommunications
JCA	J.C. Air
JCC	J.C. Chastain
JCP	J.C. Penney Company
JSB	J.S. Betts Co.
JHS	J&H Smith Mfg., Co.
JAH	Jahco Inc.
JAM	Jampro Antenna Co.
JNL	Janel Labs
JRC	Japan Radio Co.
JRL	Japan Remote Control Company, Ltd.
JAC	Jasco International
JAS	Jasik Laboratory
JAY	Jay Tapp Inc.
JAB	Jaybeam
JEF	Jefferson Ray Inc.

TRV	Jefferson Travis
JER	Jerrold Electronics Corp.
JEP	Jet Propulsion Laboratory
JET	Jetronix
JFD	JFD Research-Development Laboratories
JRS	Joes Radio Shop
JDE	John Deere
JHU	Johns Hopkins University
JNN	Johnson Associates
JCI	Johnson Control, Inc.
JOH	Johnson E.F.
JVC	JVC Corp.
KAL	K and L Microwave Inc., A Dover Tech Co.
KFE	K-F Electronics
KAR	Kaar Engineering
KRL	Kahn Research Laboratories
KMU	Kalmus
KAM	Kaman Electronic Systems Division
KAT	Kathrein Inc.
KAW	Kawasaki Industries
KDK	KDK Inc.
KEA	Kearfott Engineering Corp. USA
KEB	Kebby Microwave Corp.
KEI	Keith Anderson Co. or Keith V. Anderson
KEC	KEL Corp.
KTi	Keltec Industries
KEL	Kelvin Hughes Ltd.
KEN	Kennedy Co.
KED	Kenwood
KEY	Key Systems Inc.
KIL	Kilgore Corp.
KIM	Kimball Products Co.
KIN	King Radio Corp.
KIG	Kingfisher
KIS	Kings Electronics Co.
KIE	Kinn Electronics Corp.
KLM	KLM Communications
KNI	Knight Electronics Corp.
KKC	Kobe Kogyo Corp.
KOK	Kokusai Electric Co.
KOL	Kollsman Instrument Corp.
KOV	Kongsberg Vapenfabrikk
KOE	Konigsberg Electronics Inc.
KOR	KOR Electronics Inc.
KRD	Korad Corp.
KRA	Kraft Systems
KRE	Kreco Co.
KRI	Kris Inc.
KUB	Kubota Kisho Shokki Co.
KUX	Kustom Electronics Inc.
KUS	Kustom Signal Corp.
KYD	Kyokuto Denshi
KDC	Kyoritsu Dempa Co.

LGD	L'Garde
LAB	La Barge, Inc.
LFE	Laboratory for Electronics Inc.
LAF	Lafayette Radio or Lafayette Radio & Electronics
LAM	LaFayette Micro
LAG	LAG Engineering
LUG	Laguna Industries
LPE	Lambda Pacific Engineering
LMB	Lamda RF Systems
LAN	Lance Antenna Corp.
LAP	Lapointe Industries Inc.
LAR	Largo Electronic Manufacturers Inc.
LAS	Larson Electronics
LLC	Laset Link Corp.
LAT	Latus D.N. & Co.
LAV	Lavoie Laboratories Inc.
LEA	Lear Inc.
LSB	Lear Siegler/Bogen
LCM	Lecom Inc.
LET	Lectrosonics, Inc.
LEI	Leigh Instruments Ltd. or Leigh Systems
LEG	Leigle Instruments Ltd.
LEN	Lenkurt Electric Co.
LEE	Lenkurt Electric Company of Canada Ltd.
LFC	LFE Electronics Corp.
LIB	Librascope
LIG	Lightcraft Avionics
LIL	Lincoln Laboratory
LSI	Linear Systems Inc.
LIN	Ling Systems Inc.
LTV	Ling Temco Vaught Inc.
LCO	Link Communications
LIR	Linkradio or Litton Educational Technical Div. or Gonset Division of Layco Inc.
LII	Litton Industries
LIT	Litton Systems Ltd.
LIV	Livermore Data Systems
LLL	Livermore Lab
LNR	LNR Communications Inc.
LOC	Lockheed Electronics
LOS	Lockheed Sanders Inc.
LOG	Logimetrics Inc.
LEC	Lorain Electronics Corp.
LDS	Loral Data Systems
LOE	Loral Electronics Corp.
LRE	Lorenz
LOR	Lorrain County Radio Corp.
LOA	Los Alamos National Laboratories
LAA	Los Alamos Technical Associates Inc.
LOK	Lotek
LOT	Lotran Inc.
LPB	Low Power Broadcast Co.
LTS	LTV Aerospace Defense Co. (Sierra Research Division)
LED	Lucas Lebex
LUC	Lucos Air Space
LUE	Lunar

LXE	LXE Incorporated
LYN	Lynch Communications Systems Inc.
MVI	M/A-COM Video Systems Inc.
MAB	M/A Comm AC Inc.
MAM	M/A COMM MAC
MZE	M Z Enterprises
MNP	Machinostroenie N.P.O.
MKY	Mackay Radio-Telegraph Co.
MAF	MAFCO
MGC	Magellan Corporation
MAG	Magnavox Co.
MGN	Magnetic AB (Sweden)
MAI	MAICO Hearing Instruments or Mattel, Inc.
MAJ	Majestic Radio-Television Co.
MOB	Mal Mobley
MLA	Malabs
MBR	Malibu Research
MAN	Manson Laboratories Inc.
MBE	Marcel Bassaulet Electronics
MCJ	Marconi Electronics
MAC	Marconi Instruments, Division of English Electronics
MIM	Marconi International Marine Co.
MCI	Marconi Radio
MSD	Marconi Space and Defense Systems
MWT	Marconi Wireless Telegraph Co. Ltd.
MAL	Marelli Lenkurt Electric
MAY	Marine Technical Division of Dayton Aircraft
MAE	Marine-Air Systems, Ltd.
MRN	Mariner
MTX	Marintek
MAK	Mark IV Industries, Limited
MAR	Mark Products Co.
MAH	Martch Co.
MTH	Martech, Inc.
MRR	Marti
MRT	Marti Electronics
MMA	Martin Marietta Air Space
MEL	Maryland Electronics Corp.
MSA	Massa Products
MMM	Master Mobile Mounts Inc.
MAT	Matsushita Electric Corp.
MXP	Max Planck Institute
MAA	Maxar
MXN	Maxon Electronics, Inc.
MXI	MAXRAD, Inc.
MAX	Maxson Electronics Corp. (Electronics Design)
MXL	Maxwell Electronic Corp.
MBA	MB Associates
MCD	McDonnell Aircraft Corp.
MDD	McDonnell-Douglas Corp.
MCM	McMartin Industries Inc.
MDI	MDM, Inc.
MDT	MDTT Inc.
MEC	Mechanical Product Inc.

MGI	Megapulse Inc.
MGS	MEGASTAR
MEI	Meisei Denki Co.
MPR	Melpar Inc.
MEN	Mentor Radio Co.
MBC	Meteor Communications Consultants, Inc.
MTR	Meteor, Communications Corp.
MSY	Meteric Systems Corp.
MEE	Metric Engineering
MDS	Metrodata Systems
MER	Metron Instrument Co.
MET	Metrotek Electronics Co.
MCA	Micro-Avionics
MCO	Micro Communications Co.
MCT	Micro Control Specialities
MCE	Micro Electronics
MEJ	Micro Electronics Inc.
MCF	Micro Flect
MIL	Micro-Linke Corp.
MTB	Micro-Now Instruments Co., Inc.
MRI	Micro Radionics Inc.
MRS	Micro Systems Inc.
MTC	Micro-Tel Corp.
MCC	Microcom Corp.
MIC	Microdot Inc.
MDC	Microdyne Corp.
MID	Microfix Instruments Limited
MLF	Microlab/FXR, Inc.
MIF	Micromega, Divn of Bunker-Ramo Corp.
MCS	Micronetics
MIV	Microvision
MWA	Microwave Antenna Designs Inc.
MIW	Microwave Associates Inc.
MWB	Microwave Bypass Systems
MCL	Microwave Cavity Laboratory
MWC	Microwave Control Co.
MDY	Microwave Data System
MDM	Microwave Design Manufacturing Inc.
MWD	Microwave Devices Inc.
MNI	Microwave Network Inc.
MPD	Microwave Power Devices, Inc.
MWI	Microwave Power, Inc.
MPI	Microwave Products Inc.
MWO	Microwave Radio Corp.
MRW	Microwave Resources Inc.
MSC	Microwave Service Co.
MSP	Microwave Speciality Corp.
MAS	Mid American Relay Systems
MSR	Mid State Radio
MIN	Midland Intlr. Corp.
MAD	Midwest Audio Corp. or Madigan Corp.
MRC	Midwest Radio Corp.
MBI	MIL 3, Inc.
MTP	Military Technology PTY, Ltd.
MRA	Miller RA

MFT	Milliflect, Inc.
MMT	Millimeter Wave Technology
MXR	Min X Radio
MIT	Minatronics Corp.
MHR	Minneapolis Honeywell Regulator
MIR	Mirage Systems
MIA	Missawa
MIS	Mission Engineering Corp.
MCH	Mitchell Camera Corp.
MIZ	Mitchell Industries Inc.
MIE	Mitre Corp.
MRX	Mitrex
MIB	Mitsubishi Denki Co. or Mitsubishi Electric
MOX	Mobile Communications
MMR	Mobile Marine Radio
MTI	Mobile Telesystem Inc.
MTS	Mobile Telesystems
MOL	Mobilet Corp.
MOD	Modar Electronics
MME	Model Engineering and Manufacturing Corp.
MOC	Model Rectifier Co.
MOE	Monaco Enterprises Inc.
MRE	Monicor Electronics
MON	Monitor Electronics
MTN	Monitron Corp.
MOY	Monsant Co.
MNT	Montec (Divn of E-Systems)
MGW	Montgomery Ward
MNC	Montronics Inc.
MOO	Moog Industrial Control Corp.
MOR	Morad Electronics Corp.
AFX	Morfax, Ltd
MRM	Morrow Radio Manufacturing Co.
MOA	Moseley Associates Inc.
MOF	Moseley Associates Inc.
MOS	Moseley Electronics Co.
MOT	Motorola Corp.
MPH	MPH Industries, Inc.
MUL	Multi Elmac Co.
MPC	Multi-Products Co.
MUP	Multiplex Services Corp.
MPN	Multipoint Network
MUS	Multitech Power Systems/Avionics
MUT	Multitone Electronics Ltd.
MUI	Multronics Inc.
MUN	Muniquip Co.
MEM	Munston Electronic Manufacturing Co.
MUX	Munston Electronics Manufacturing Corp.
MUZ	Munston Manufacturing & Service Inc.
MUE	Murphy Electronics Division of Rank Corp.
NYT	N.Y. Technical Institute of Cincinnati
NSI	Nady System, Inc.
NAL	NALCO
NAN	Nanayo Electric Co.

NAK	Nankai Musen Co.
NPC	NAPCO Industries
NRB	NARCO
NAR	Narda Microwave Corp.
NRC	National Aeronautic Corp.
NCR	National Cash Register of Canada
NCF	National Center for Atmospheric Research
NAC	National Co.
NEL	National Electronics Laboratory
NAU	Nautel
NAD	Naval Air Dev. Ctr.
NAW	Naval Air Warfare Ctr. Weapons Div.
NAM	Naval Ammo Depot
NAV	Naval Avionics
NVE	Naval Engineering Center
NOS	Naval Oceans System Center
NOT	Naval Ordnance Test Center, China Lake
NUS	Naval Underwater Systems Center
NWC	Naval Weapons Center
NVC	Navcom Defense Electronics
NEA	NEC America Inc.
NEC	Nemsclarke
NEU	Neulink, Divn of Celltronics
NEB	NEUTEC
NAP	Nevada Air Products Co.
NMT	New Mexico Tech
NMU	New Mexico University
NTD	New Tronics Division
NEW	Newton Co.
NET	Newtronics, Inc.
NEI	Nielson Electronics Division
NDC	Nihon Denki Co.
NIM	Nihon Musen Co.
NIE	Nippon Electronic Company Ltd.
NIS	Nissin Electronics Inc.
NIT	NITECH, Inc.
NRD	Norand Data Sys
NDS	Norand Data Systems, Inc.
NOD	Norden Division
NAH	North American Philips
NOR	Northeast Medal Industries
NOE	Northeastern Engineering Co.
NRE	Northern Electric Co. Ltd.
NRA	Northern Radio Co. or Northern Electronic Co.
NSL	Northern Scientific Laboratory
NTL	Northern Telecommunications Inc.
NOC	Northrop Corporation
NSA	Northstar Electronics Inc.
NST	Northstar Technologies
NIC	Northwest Instrument Co.
NOV	Nova-Tech/Avionics or Nova Tech Inc.
NOK	Novak Electronics
NUR	Nurad Inc.
OAO	OAO Corporation

OAR	Ocean Applied Research Corp.
OCT	Octagon
OPD	Odetics Precision Time Division
OOS	Odom Offshore Survey
ODM	ODOM
OKI	OKI Denki Co. or OKI Electric Industry Company Ltd.
OAI	Oklahoma Aerotronics, Inc.
OKA	Oklahoma Electronics Co.
OSU	Oklahoma State University
OLS	Olson Radio Corp.
OME	Omera (France)
OMN	Omnitek
OPS	Opos Electronics
OPE	Opseis
OPT	Optic Electronic Corp.
OPM	Opto-Mechnik
ORB	Orbit Electronics
OSC	Orbital Sciences Corp.
OSB	Oregon State Board of Forestry
OSH	Oregon State Highway Dept.
ORE	Oremco
OEC	Osborne Electronics Corp.
OUT	Ourercom Electronics Corp.
OTR	Outer Communication Co.
OZD	Ozalid Division
PGE	P.G. Electronics
PIC	P-I-C Communications Inc.
PCC	Pace Communications Corp.
PAD	Pacific Advanced Engineering Inc.
PAI	Pacific Aerosystem, Inc.
PCM	Pacific Communications
PCR	Pacific Crest Corporation
PEI	Pacific Engineering, Inc.
PMR	Pacific Missile Range Co.
PMT	Pacific Missile Test Center
PNL	Pacific Northwest Lab
PWI	Pacific World Industries
PAK	Packard Bell Electronics Corp.
PCE	Page Communications Engineers Inc.
PAL	Palmer, B. Co.
PAA	Pan American Airways
PAN	Panronics Corp.
PSC	Paramax Systems Corp.
PRS	Parisi Antennas
PAE	Park Aire Electronics
PAR	Parsons Electronics
PRN	Parsons, Ralph M. Co.
PAZ	Parzen Research Inc.
PAT	Patterson H. J.
PMC	Patterson Manufacturing Company Inc.
PAU	Pauldon
PAV	PAVCO
PCL	PC Electronics
PEA	Pearce Simpson Inc.

PEG	Penninsula Engineering Corp.
PER	Perkin Elmer Inc.
PHD	Phelps Dodge
PHI	Philco Corp.
PHC	Philco Corporation of Canada Ltd.
PHL	Philips Gloeilampene Abreiken (Neth) or Philips Broadcast Equipment Corp.
PLP	Phillips Audio Visual Corp.
PHM	Philmore Manufacturing Co.
PSL	Physical Science Lab
PIS	Picattiny Arsenal
PBI	Pickard-Burns Inc.
PIE	Piezo Ltd.
PIA	Pinson Associates Inc.
PAC	Piper Aircraft Corp. (Electronics Division)
PLC	Plectron Corp.
PLE	Plessey Company Ltd. (UK)
PNH	PNH Electronics Co.
POE	Pointer Electronics
PRL	Polar Research Lab.
POL	Polarad Electronics Corp.
PLR	Polestar
PTA	Polytechnica
POX	Polytronics Communications or Pro-Line Electronics
POY	Polytronics Laboratories Inc.
PRI	Polytronics Research Inc.
POM	Pomije Electronics Co. or Palomar Instrument Co.
POC	Port-Com
POV	Port-O-Vox Corp.
PST	Power Systems Technology Inc.
PED	Practical Engineering & Development Corp.
PRE	Premax Products Division
PRT	Pritchard Brown
PBR	Pro Brand International
PCO	Procom
PRO	Prodelin Inc.
PFE	Professional Electronics
PCS	Proportional Control Systems
PTI	Protection Technology Inc.
PRX	Proxim
PSI	Public Systems Inc.
PUL	Pulse Engineering Inc.
PYC	Pye Communications
PYA	Pye Corporation of America
PYE	Pyle Telecommunications Ltd. (UK)
QUC	QALCOMM
QEI	QEI Corporation
QEN	Quadrant Engineering Inc.
QUT	QUALI-TRON
QUA	Qualimetrics Corp.
QSC	Quanta System Corp.
QUE	QUE Enterprises Inc.
QEL	Quest Electronics
QUI	Quintron Corp.

MLR	R. A. Miller Industries
RFT	R. F. Technology
RJG	R. J. Gumm Co.
RAF	R&D Assoc. Electronics Navigation Industries Inc.
RAC	Racal Communication Inc.
RMI	Racal Decca Marine Inc.
RAE	Racal Electronics Ltd.
RAI	Racal Instruments Ltd.
RCN	Racon, Inc.
RQM	Racon Inc. Quality Microwave
RAA	Rad-O-Lite
RDA	Radair Inc.
RAG	Radian Corp.
RAD	Radiation Inc.
RCE	Radio Communications Equipment Engineering Ltd. (Canada)
RCA	Radio Corporation of America
REL	Radio Electronics Laboratories
REN	Radio Engineering Laboratories
RFI	Radio Frequency Communications, Inc.
RHU	Radio Holland Group
RII	Radio Industries Inc.
RDM	Radio Marine Corp.
RAP	Radio Plane Co.
RRC	Radio Receptor Co.
RRI	Radio Research Instrument Co.
RAS	Radio Shack
RDB	Radio Specialists Co.
ROM	Radio Specialties Mfg. Co.
RDS	Radio Specialty Co.
RSM	Radio Specialty Manufacturing
RSI	Radio Systems, Inc.
RNS	Radionics
RFE	Rafael
RYC	Railway Communication Inc.
RTN	Randtron Systems
RGC	Ranger Communications
RAN	Rantec Corp.
RAT	Ratelco Inc.
RAU	Raulond-Borge Corp.
RAJ	Ray Jefferson Co.
RDN	Raydyne Inc.
JRD	RAYJ
RAY	Raytheon Co. or Raytheon Manufacturing Co.
RCM	RC Manufacturing Co.
RCV	RCA Victor Company Ltd.
REC	Reach Electronics Corp.
RIA	Reaction Institute Inc.
REE	Reaction Instruments Inc.
RLC	Realistic Co.
REA	Realtons Electronics Inc.
ROC	Recon Optical Inc.
RED	Redifon Ltd.
REV	Reeves Instrument Corp.
RTK	REFTEK
REI	Regency Electronics Inc.

RIZ	Rel Inc.
REZ	Relco
REB	Remcon
REM	Remler Company Ltd.
RMT	Remotec, Inc.
REO	Remtron
REP	Repco Inc. or R.G.P. Co.
REF	Republic Electronics Films Inc.
RSL	Resalab, Inc.
RES	Resdel Engineering Corp.
RET	Resonant Electronics
REX	Rex Bassett Inc.
RFC	RF Communications Associates Inc.
RFH	RF Harris Electronics
RAB	RF Sound Inc.
RHG	RHG Electronics Laboratories
RRH	Richard R. Hayes
RCI	Richmond Communications Inc.
REU	Ridge Electronics Corp.
RIT	Ritcon Inc.
RTR	Ritron, Inc.
JAR	Robert A. Jones
DRC	Robert Dollar Co.
RST	Robertson-Shipmate
ROB	Robinson Electronics
ROE	Robinson Engineering Co.
RWC	Rockwell, Collins
RIE	Rockwell International Electronics
ROD	Rodelco
ROS	Rohde Schwarz
RDC	Rome Air Development Center
REG	Ross Engineering
ROT	Rothenbuhler Engineering
ROW	Rowe Industries
ROX	Roxy Ofuna Electronics
ROY	Royal Electronics Corp.
ROL	Royal Exec
RSE	RS Electronics Corp.
RSS	RS Systems Inc.
RUS	Rust Corp of America
RYA	Ryan Aeronautical Co.
RYU	Ryukyu Tsushinki Kogyo Co.
RCP	S&O RC Products
SAP	SA Philips Pty. Ltd.
SAB	SAAB
SAC	Sabre Communications Corp.
SDI	Safety Devices Inc.
SAG	Sage Laboratories
SAL	Salco Manufacturing Co.
SAM	Sampson Co.
SMT	Samson Technologies Corp.
SEE	San Endiron General
SAN	Sanders Associates Inc.
SAD	Sandia Corp.

STJ	Sanford Telecommunications Institute Inc.
SBR	Santa Barbara Research Ctr.
SNT	Santec
SAT	Sarkes Tarzian Inc.
SNF	Sarnoff David Research Center
SLT	Satellite Transmission Systems, Inc.
SCA	Scala Radio Corp.
SLI	Scanwell Laboratories Inc.
SCH	Schuttig Atlantic
SCT	Science Applications International Technology, Inc.
SCI	Scientific Atlanta Co.
SCN	Scientific Communications
SRS	Scientific Radio Systems Inc.
SCX	Scintrex Ltd.
SCM	SCM Melabs Inc.
SCO	Scope Inc.
SRL	Scott EH Radio Laboratories Inc.
SNI	Sea Marine International
SBE	Seaboard Electronics
SEP	Seaphone Inc.
SEA	Sears Roebuck Co.
SEM	Seatron Inc.
SCC	Secode Corp.
SEK	Seiki Electronics Inc.
SEI	Seiscor Manufacturing Co.
SES	Seismograph Service Corp.
SEL	Selenia S.P.A. (Italy)
SEO	SEMCO
SEN	Sennheiser Electronic Corp.
SNE	Senses International
SSR	Sensor Systems
SNS	Senstar Corp.
SNL	Sentinel
SEX	Sentrax Perimeter Protection System
SIS	Sercel Industries Corp.
SDX	Serdex Corp.
SRV	Serv-Air, Inc.
STP	Serve-Tek Products Inc.
SER	Servo Corp. of America
SET	Setchell Carlson Inc.
SAQ	Sexant Anionique
SHD	Shadow Technology
SHA	Shakespeare
SHK	Shank Communication Co.
SHP	Shart Corp.
SLL	Shell Development Co.
SHI	Shiba Electric Co.
SHU	Shure Brothers Inc.
STX	SI-Tex Marine Electronics, Inc.
SBA	Sideband Associates Inc.
SBT	Sideband Technology, Inc.
SIH	Siemens-Halske
SIE	Sierra Electronic Division of Philco
SMO	Sierra Misco
SRM	Sierra Monolithics Inc.

SNC	Sierra Nevada Corp.
SRC	Sierra Research Corp.
SAS	Sigmatas Antenna
SIG	Signal Communications
SPP	Simmonds Precision Products, Inc.
SIM	Simpson Electronics
SLR	Sinclair Radio Laboratories
STH	Sintra-Thomson
SIP	Sippian Ocean Systems
SIT	SITCO
SIR	Sitra
SKN	Skanti
SKM	Skipper Marine Electronic
SKY	Skycrafters Inc.
SKD	Skydata, Inc.
SKX	Skyphone Division
SRI	Skyway Radio Inc.
SME	Smithroot Electronics
SMI	Smiths Industries Inc.
SRA	Smythe Research Associates
SOL	Soladyne International Inc.
SEG	Solartron Electronics Group Ltd.
SOI	Solid State Technology
SON	Sonar Radio Corp.
SOE	Sonex Inc.
SOY	Sony
SOU	Sound-Craft Systems Inc.
SMD	South Midlands Communications Ltd.
SOZ	Southcom International Inc.
SOA	Southern Avionics
SMW	Southern California Microwave
SMC	Southern Marine Corporation
SMR	Southern Marine Research, Inc.
SWM	Southwest Microwave Co., Inc.
SWR	Southwest Research Institute
SWN	Southwestern
SAV	Space Avionics Inc.
SDC	Space Data Corp.
SPE	Space Electronics
SPG	Space General
SML	Space Microwave Lab.
SOS	Space Ordinance Systems
SPC	Space Technical Laboratories
SPA	Spar Aerospace Ltd.
SPT	Sparta Electronic Corp.
SPN	Sparton Electronics
SPF	SPC Technology, Divn. of Remier Industries
SPQ	Spears Associates
SPI	Specific Products Inc.
SPX	Specifics Co.
SPS	Spectra-Physics
SPM	Spectra Physics Co.
SPL	Spectrolab Inc.
SIN	Spectrum Communications, Inc.
SKL	Spencer Kennedy Laboratories

SPD	Sperry Corp.
SPR	Sperry Corp. or Servo Corporation of America
SRR	Sperry Flight Systems
SGC	Sperry Gyroscope Company of Canada Ltd.
SPY	Sperry Gyroscope Company Inc.
SPZ	Sperry Marine Systems
SPW	Sperry Piedmont Co.
SIL	Spilsbury & Tindall
SRE	Sprengnether Equipment Co.
SAI	Springer Aircraft Radio Corp.
SQA	Square D Co.
SQU	Squires Sanders Inc.
SRT	SR Telecom, Inc.
STM	ST Microwave
STV	ST Research Corp.
STI	Stailes Inc. or Star Lifeline Ltd.
STB	Standard Communications
STS	Standard Electrica S.A.
STD	Standard Elektrik Lorenz
STA	Standard Electronics
SRD	Standard Radio and Telefon ABITT
STC	Standard Telephones-Cables Ltd.
STQ	Stanford Research Institute
SFI	Stanford Telecommunications Inc.
STF	Stanley Electronics Co.
SSC	States Steamship Co.
SCR	Steinbrecher Corporation
SSY	Stellar System
SIA	Stephens Engineering Associates, Inc.
STE	Stephenson
STL	Sterling Precision Corp.
STW	Stewart Warner Corporation of Canada Ltd.
SAR	Stoddard Aircraft Radio Co.
STN	Stoner Electronics
STG	Stoner-Goral Communications Co.
STO	Storno Radio Co.
STU	Strand Engineering
STR	Stromberg Carlson Products Co.
SGE	Strong Electronics
SEC	Struthers Electronics Corp.
SUM	Summers & Mills
SUC	Sun Chemical Corp.
SUN	Sunair Electronics Inc.
SSI	Surface System Inc.
SUT	Sutron Co.
SVR	Svenska Radio
SWA	Swan Electronic Corp.
SWI	Swintek Cordless Microphone Co.
SYL	Sylvania Electronics Defense Laboratory or Sylvania Electronics Products
SMG	Symbol Technology, Inc.
SYM	Symetrics Engineering Corp.
SYX	Syndetix
SYN	Synergetics
SYA	Syracuse Research Corp.
SYC	Syscon Corporation

SPB	System Planning Co.
SYD	Systems Dynamics
SYE	Systems Engineering & Management Corporation
SYR	Systems Research Laboratories, Inc.
SYS	Systron Donner Corp (Demornay Bonardi)
TAO	Taco, Inc.
TSI	Tactical Systems Inc.
TAD	TAD-American Corp.
TIS	Tadiran Israel Industries, Ltd.
PTL	TADS Development Labs, Inc.
TAE	Tait Electronics, Ltd.
TAI	Taiyo Musen Co.
TAM	Tamer Electronics Inc.
TAS	Tasker or Tasker Industries
TBN	Tayburn
TAY	Taylor Electrical Instrument Ltd.
TCM	TCOM Industries, Inc.
TDS	TDS Electronics Company Ltd.
TEK	Te-Ka-De Co.
TEE	Teaberry Electronics Corp.
TCD	Techdyn Systems Inc.
TAC	Technical Appliance Corp.
TAN	Technical Associates of New Orleans
THL	Technical Electronics Co.
TMC	Technical Materiel Corp.
TRC	Technical Radio Corp.
TSE	Technical Science
TSA	Technical Systems Associates
TSD	Technical Systems Division
TES	Technisonic Industries
TAP	Technology Applications
TFC	Technology for Communications, International
THY	Technology Service Corp.
TCN	Technos International Corp.
TEA	Tek-Aid Inc.
TKM	TEK Mark Company
TPI	TEK Products Inc.
TKL	Teklogix, Inc.
TCI	Tel Com Industries
TIE	Tel Instrument Electronics
TEG	Telautograph Corp.
TEB	Telco
TED	Teldex
TCC	Tele Comm Communications
TCE	Tele Communications Corp.
TDY	Tele-Dynamics
TEH	Telechrome
TDI	TeleDesign
TII	Teledyne Industries, Inc.
TDE	Teledyne Ryan Electronics
TSC	Teledyne Systems Co.
TDC	Teledyne T/M Co.
TLF	Telefunken Gmbh.
TEM	Telemet Co.

TSY	Telemetry Systems Inc.
TLM	Telemobile Inc.
TEO	Telemotive
TLE	Telemus Electronics Systems Inc.
TEJ	Telephone Engineering Corp.
TLP	Telephonic Corp.
TTS	Telesciences Transmission System Inc.
TSS	Telesystems, Inc.
TEN	Teletronix Engineering Co.
TIA	Television Technology Corp.
TTI	Television Transmission Inc.
TLX	Telex Co.
TIN	Telinstrument Co.
TLK	Telkoo
TLR	Telline Radio
TFD	Telludift
TLA	Telonica Corp.
TNS	Telonics
TEL	Telrex Laboratories
TTX	Teltrol Corp.
TDT	Teludisc Inc.
TRO	Telurometer Corp.
TEC	Telviso Electronics
TXC	Telxon Corporation
TCO	Temco Aerosystems
TME	Temec Corp.
TEQ	Tenna Corp.
TEP	Tepco Corp.
TER	Terra-Com
TEI	Texas Instrument Inc.
TXS	Texscan Instruments
TEX	Textran Division
TXA	Textron Defense Systems
THI	Thiokol Chemical Corp.
THO	Thomas Mold-Die Co.
THC	Thomson CSF
TOH	Thomson-Houston (France)
THE	Thorn EMI Electronics, Inc.
THN	Thorn Microwave Devices
TAT	Thrane & Thrane
TDL	Tidelands
TFT	Time & Frequency Tech. Inc.
TTN	Titan Severe Environment Systems
TML	TMC Ltd.
TMD	TMC Systems & Power Corp. or Telemotive Division of Dynascan
TKA	Tokai Communication Corp.
TKS	Tokyo Keiki Co.
TOK	Tokyo Shibaura Electronics Co.
TOM	Tomcor
TOP	Topp Manufacturing Co.
TOS	Toshiba Co.
TOA	Townsend Associates
TOY	Toycon
TRI	Tracor Inc.
TRD	Traid Corp.

TRM	Tram/Diamond Corp.
TRN	Tran-Com
TRS	Tran-Crypt
TRT	Trans Texas
TRB	Trans World Communications, Inc.
TCT	Transcidtronic
TSB	Transcience
TRA	Transco Products Inc.
TIL	Transcript International
TRQ	Transformation Techniques, Inc.
TRE	Transmitter Equipment Manufacturing Co.
TRZ	Travelers Information Services Inc.
TRF	TRF Company
TRP	Tri-Com Inc.
TDA	Tridea Electric Corp.
TRL	Trilectic Co.
TBL	Trimble Navigation
TKC	Trio-Kenwood Communications
TIV	Trivec-Avent
TTK	Tron-Tek Inc.
TLC	TRT Groupe
TRU	Truetime
TRW	TRW Electronics
TRY	Trylon Inc.
TUL	Tull Aviation Corp.
TUR	Turner Aircraft Radio Inc.
TYC	Tycho-Tech
UEC	U.S. Army Electronics Command
USM	U.S. Metal Products Co.
UNN	Unicom
UDN	Uniden
UNM	Unimetrics Inc.
UNS	Unisys Corp.
UTE	Unitec
UED	United Electro Dynamics Inc.
USL	United Scientific Laboratory
UNC	United States Navguide Corp.
UNT	United Telecontrol
UFI	Uniten/Force Inc.
UDE	Univ. of Denver
LCA	Univ. of Lowell Ctr. for Atmospheric Research
UNI	Univac Corp.
UNA	Universal Navigation Corporation
UIL	University of Illinois
UMI	University of Miami
USE	Use Corporation
UAF	USN Avionics Facility
UTI	Utica Communications
UTL	UTL Corp.
VAI	Vaisala
VFR	Valley Forge Research Center
VAN	Van Norman Industries Inc.
VNG	Vanguard Med Products Co.

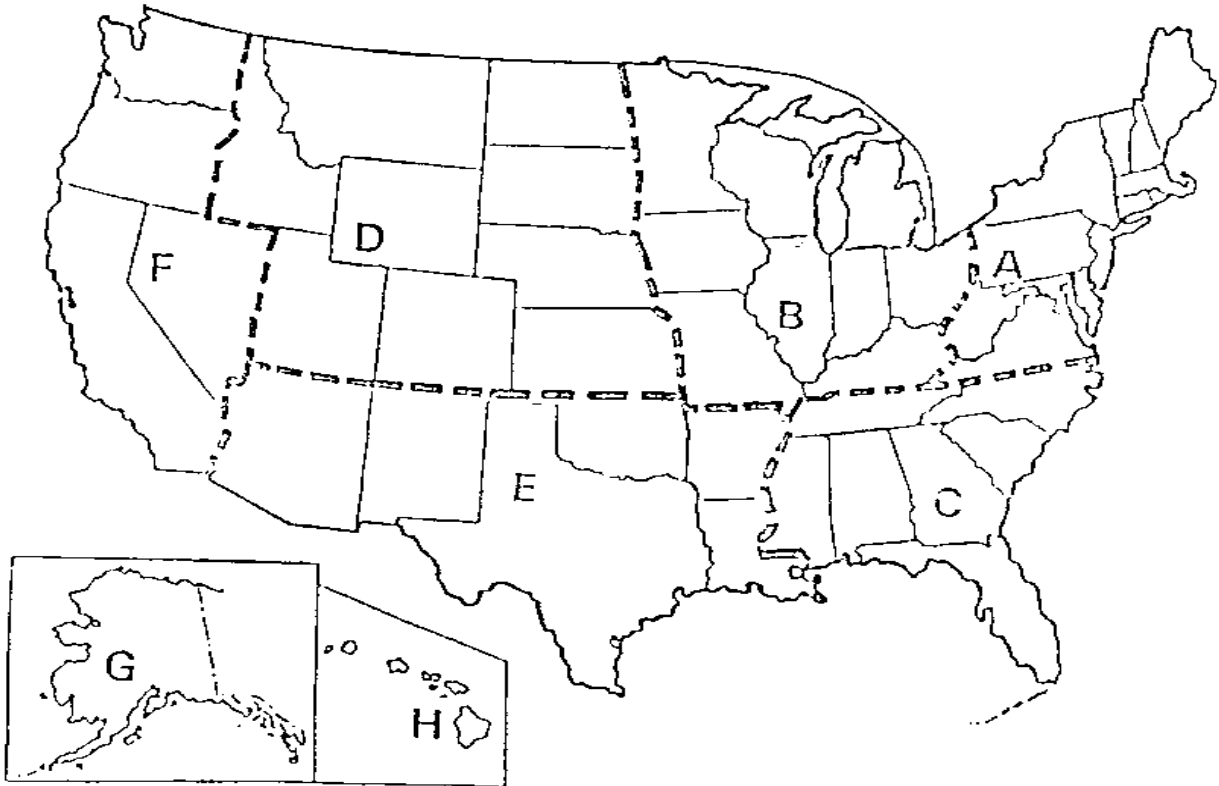
VRD	Varda Company
VAR	Varian Associates
VRO	Varo, Inc.
VUA	Vector Division of United Aircraft
VEC	Vector Manufacture Co.
VTC	Vectran Corp.
VEG	Vega Electronics Corp.
VSC	Ventanna Sciences Inc.
VEN	Ventron Electronics Corp.
VIF	Verifone, Inc.
VER	Versa-Count
VHF	VHF Engineering Co.
VSI	Viable Systems, Inc.
VST	Viasat Technologies Co.
VAT	Viatec
VIN	Vicon Industries, Inc.
VIC	Victor RF-Microwave Co.
VIA	Victoreen Instrument Co.
VDC	Video Consultants
VMI	Video Methods, Inc.
VID	Vidor Scientific Inc.
VIX	Vista Manufacturing Co.
VEP	Visual Electronics Corp.
VIS	Visual Manufacturing Division
VIL	Vitel
VIT	Vitro Electronics
VIZ	VIZ Corp.
VOC	Vocaline Company of America
VOU	Vought Corp.
WAD	Waddell Dynamics
WAL	Walco Electronic Co.
WGT	Wandel and Golterman
WEI	Ward Electronic Industries
WAA	Washington Aluminum Co.
WAS	Washington State Patrol
WAT	Washington Technological Assn., Inc
WAE	Waveband Electronics
WAG	Waveguide
WAV	Wavetek
WCI	Webcor Inc.
WGC	Webster Green Co.
WEB	Webster Manufacturing Co.
WBL	Weibel Scientific Inc.
WET	Weight-Tronics
WEL	Well Sentry Inc.
WEM	Wems Inc.
WBA	West Bend Autotronics, Inc.
WEC	Western Electric Company Inc.
WEU	Western Union Telegraph Co. or Western Union
WDC	Westin Data Comms
WAB	Westinghouse Air Brake Co.
WES	Westinghouse Electric Co.
WHE	Whelen
WHM	Whistler Marine Inc.

WHI	White J.L. Co.
WHT	Whittaker Corp.
WED	Winston Electronics Division
WBI	Wyoming Biotelemetry Inc.

EXX	XETEX
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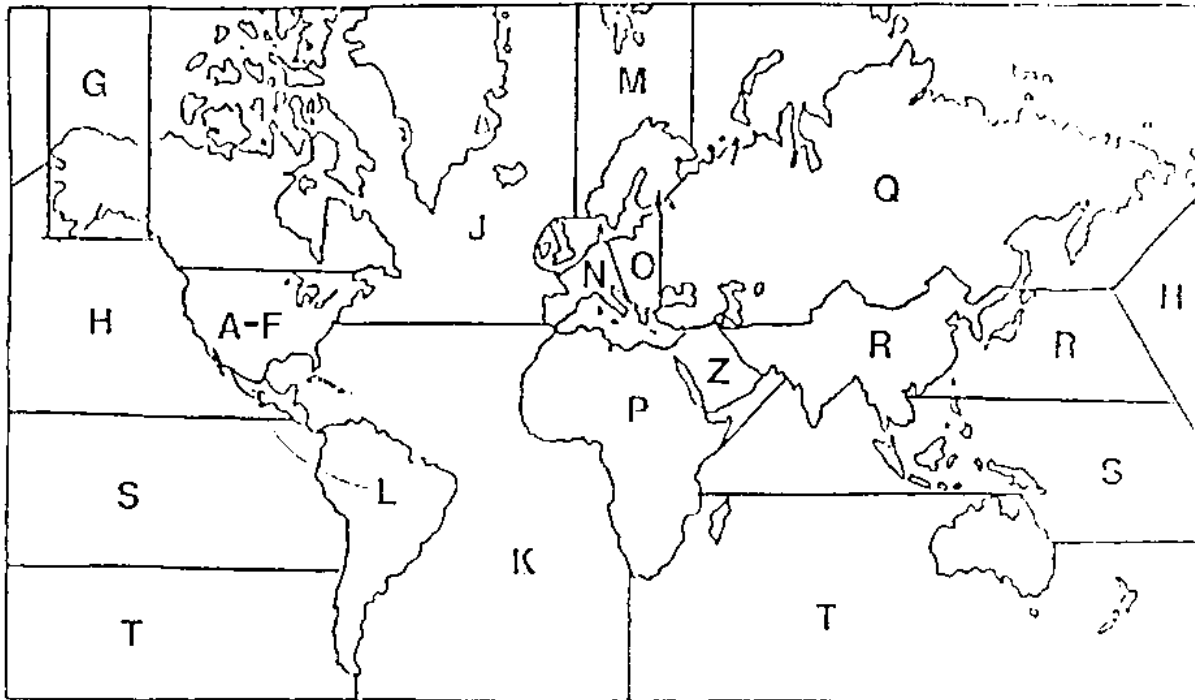
ANNEX E - JSC MINOR AREA CODES

1. The following minor area codes are used in Data Items 373 and 473 to speed up certain selects for data outputs. This annex is organized to graphically display the minor area codes in figures 1 and 2. There are two listings sorted first by minor area code (subparagraph a) and secondly by state/country (subparagraph b).



CONUS 48 States/DC = Y

Figure A-E-1. JSC Area Codes (USA)



Note: Antarctica = L
 Worldwide = U
 Space = V
 CONUS 48 states and DC = Y
 Miscellaneous = X

Figure A-E-2 JSC Area Codes World

a. This paragraph is sorted by the minor area code.

CHESAPEAKE BAY	A	SOUTH DAKOTA	D
CONNECTICUT	A	UTAH	D
DELAWARE	A	WYOMING	D
DISTRICT OF COLUMBIA	A		
FIRST NAV DISTRICT	A	ARIZONA	E
LAKE ONTARIO	A	ARKANSAS E	
MAINE	A	EIGHTH NAV DIST	E
MARYLAND	A	LOUISIANA	E
MASSACHUSETTS	A	NEW MEXICO	E
NAV DIST WASH DC	A	OKLAHOMA	E
NEW YORK A		SW REGION CAP 6	E
NEW HAMSPHIRE	A	TEXAS	E
NEW JERSEY	A		
PENNSYLVANIA	A	CALIFORNIA	F
RHODE ISLAND	A	NEVADA	F
THIRD NAV DISTRICT	A	OREGON	F
VERMONT	A	PAC REGION CAP 8	F
VIRGINIA	A	WASHINGTON	F
WEST VIRGINIA	A		
		ALASKA	G
GREAT LAKES	B	PACIFIC OCEAN NE	G
ILLINOIS	B		
INDIANA	B	ALASKA ALEUTIAN IS	H
IOWA	B	BERING SEA	H
KENTUCKY B		FOURTEENTH NAV DIS	H
LAKE ERIE	B	HAWAII	H
LAKE SUPERIOR	B	JOHNSTON ISLAND	H
LAKE HURON	B	MIDWAY ISLAND	H
LAKE MICHIGAN	B	PACIFIC OCEAN NW	H
MICHIGAN	B		
MINNESOTA	B	ATLANTIC OCEAN NW	J
MISSOURI	B	AZORES	J
OHIO	B	CANADA	J
WISCONSIN	B	FAEROES ISLANDES	J
		GREENLAND	J
ALABAMA	C	HUDSON BAY	J
FLORIDA	C	ICELAND	J
GEORGIA	C	JAN MAYEN	J
MISSISSIPPI	C	S. PIERRE/MIQUELON	J
NORTH CAROLINA	C		
SIXTH NAV DISTRICT	C	ANGUILLA	K
SOUTH CAROLINA	C	ANTIGUA/BARBUDA	K
TENNESSEE	C	ARUBA	K
		ASCENSION	K
COLORADO	D	ATLANTIC OCEAN WC	K
IDAHO	D	BAHAMAS	K
KANSAS	D	BARBADOS	K
MONTANA	D	BERMUDA	K
NEBRASKA D		BRIT WEST INDIES	K
NORTH DAKOTA	D	CANARIES	K
RCKY MTN RGN. CAP 7	D	CAPE VERDE ISLAND	K

CARIBBEAN	K	SOUTH AMERICA	L
CAYMAN ISLAND K		SURINAM REP OF	L
CUBA	K	SW ATLANTIC OCEAN	L
DOMINICA	K	URUGUAY REPUBLIC	L
DOMINICAN REPUBLIC	K	VENEZUELA REPUBLIC	L
FALKLAND ISLANDS	K		
FIFTEENTH NAV DIST	K	BALTIC SEA	M
GRENADA	K	FINLAND	M
GUADELOUPE F DEPT	K	NORWAY	M
GULF OF MEXICO	K	NORWEGIAN SEA	M
HAITI REPUBLIC	K	SPITSBERGEN	M
JAMAICA	K	SWEDEN	M
LESSER ANTILLES	K		
MADEIRA	K	AEGEAN SEA	N
MARTINIQUE F DEPT	K	ANDORRA	N
MONTSERRAT	K	ATLANTIC OCEAN NE	N
NETHERLND ANTILLES	K	AUSTRIA	N
PANAMA CANAL ZONE	K	BELGIUM	N
PUERTO RICO	K	BERLIN WEST	N
S. TOME/PRINCIPE	K	CORSICA	N
S. HELENA	K	CRETE	N
SAINT LUCIA	K	CYPRUS REPUBLIC	N
ST CRISTOPH/NEVIS	K	DENMARK	N
ST VINCENT/GRENADIN	K	ENGLISH CHANNEL	N
SWAN ISLAND	K	EUROPE	N
TENTH NAV DISTRICT	K	FRANCE	N
TRINIDAD/TOBAGO	K	GERMAN DEM REP	N
TRISTAN DA CUNHA	K	GERMANY	N
TURKS/CAICOS IS.	K	GIBRALTAR	N
VIRGIN IS BR. (ITU)	K	GREECE	N
VIRGIN IS US (ITU)	K	IRELAND	N
VIRGIN ISLANDS	K	ITALY	N
		LIECHTENSTEIN	N
ANTARTICA	L	LUXEMBOURG	N
ARGENTINE REPUBLIC	L	MALTA	N
BOLIVA L		MEDITERRANEAN SEA	N
BRAZIL	L	MEDITERRANEAN-EAST	N
CENTRAL AMERICA	L	MEDITERRANEAN-WEST	N
CHILE (EX EASTER I)	L	MONACO	N
COLUMBIA REPUBLIC	L	NATO EUROPE ALL	N
COSTA RICA	L	NETHERLANDS KINGDM	N
ECUADOR	L	NORTH SEA	N
EL SALVADOR REP.	L	PORTUGAL	N
GUATEMALA	L	SARDINIA	N
GUYANA	L	SICILY	N
GUYANA (FRENCH)	L	SPAIN	N
HONDORAS REPUBLIC	L	SWITZERLAND CONFED	N
LATIN AMERICA	L	TURKEY	N
MEXICO	L	UK GREAT BRITAIN	N
NICARAGUA	L	VATICAN CITY STATE	N
PACIFIC OCEAN SE	L		
PANAMA REPUBLIC	L	ALBANIA REPUBLIC	O
PARAGUAY	L	BULGARIA PEO REPUB	O
PERU	L	CZECHOSLOVAKIA	O

HUNGARIAN REPUBLIC	O	TUNISIA	P
POLAND PEO REPUBLI	O	UGANDA	P
ROUMANIA SOCLT REP	O	UN TRUCE SUPER JER	P
YOGOSLAVIA	O	ZAIRE	P
		ZAIRE	P
AFRICA	P	ZAMBIA REPUBLIC	P
ALGERIA	P	ZIMBABWE (REP. OF)	P
ANGOLA	P		
ATLANTIC OCEAN SE	P	BYELORUSSIAN SSR	Q
BENIN	P	MONGOLIAN REPUBLIC	Q
BHUTAN (ITU)	P	UKRAINIAN SSR	Q
BOTSWANA	P	USSR	Q
BURKINA FASO	P		
BURUNDI KINGDOM	P	CHINA	R
CAMEROON REPUBLIC	P	HONG KONG	R
CENTRL AFRICAN REP	P	JAPAN	R
CHAD	P	KOREA (PEOPLES REP.)	R
CONGO PEO REPUBLIC	P	KOREA REPUBLIC	R
EQUATORIAL GUINEA	P	MACAO	R
GABON REPUBLIC	P	SOUTH CHINA SEA	R
GAMBIA (BATHURST)	P		
GHANA	P	AMERICAN SAMOA	S
GUINEA REPUBLIC	P	ASIA SOUTH	S
GUINES-BISSAU	P	ASIA SOUTHEAST	S
ISRAEL (STATE OF)	P	ASIA	S
IVORY COAST REPUB	P	BANGLADESH	S
LEBANON	P	BHUTAN	S
LESOTHO KINGDOM OF	P	BRUNEI	S
LIBERIA REPUBLIC	P	BURMA (UNION CF)	S
LIBYAN ARAB REPUB	P	CAROLINE ISLANDS	S
MADAGASCAR DEM REP	P	CELEBES SEA	S
MALAWI	P	CHAGOS ARCHIPELAGO	S
MALI REPUBLIC	P	CHRISTMAS I INDO	S
MARION ISLAND	P	CHRISTMAS I (PAC)	S
MAURITANIA (REP. OF)	P	COMORO ISLAND	S
MAYOTTE ISLAND	P	COOK ISLANDS	S
MOROCCO (KINGDOM OF)	P	COOK ISLANDS (NORTH)	S
MOZAMBIQUE	P	EASTER I (CHILE)	S
NIGER (REPUBLIC OF)	P	FIJI ISLANDS	S
NIGERIA (REPUBLIC OF)	P	FRENCH POLYNESIA	S
RODRIGUEZ	P	GUAM	S
RWANDA REPUBLIC	P	HOWLAND ISLAND	S
SAN MARINO (ITU)	P	INDIA REPUBLIC OF	S
SENEGAL REPUBLIC	P	INDONESIA REPUBLIC	S
SIERRA LEONE	P	JAMMU AND KASHMIR	S
SO AFRICA REPUBLIC	P	JARVIS ISLAND	S
SP TER NE MOROCCO	P	KHMER REPUBLIC	S
SPANISH SAHARIAN T	P	KIRIBATI	S
SWAZILAND KINGDOM	P	LAOS KINGDOM	S
SYRIAN ARAB REP.	P	MALAYSIA	S
TANZANIA REPUBLIC	P	MALDIVES REPUBLIC	S
TANZANIA (ITU)	P	MARIANA IS (EX GUM)	S
TANZANIA (ZANZIBAR)	P	MARSHALL ISLANDS	S
TOGOLESE REPUBLIC	P	MICRONESIA FED ST	S

NAURU ISLANDS	S		
NEPAL	S	ALL	X
NETHLANDS N GU	S	ARABIAN SEA	X
NEW GUINES TERR	S	ARCTIC OCEAN	X
NEW CALEDONIA	S	ATLANTIC NORTH	X
NIUE ISLAND	S	ATLANTIC EAST	X
OCEANIA	S	ATLANTIC OCEAN	X
PALAU REPUBLIC OF	S	CANADIAN OCEAN STA	X
PALMYRA ISLAND	S	CLASSIFIED LOCATIN	X
PAPUA (TERRITORY OF)	S	COMM SPCE-RUSSIA	X
PAPUA NEW GUINEA	S	COMM SPCE-USA	X
PARACEL ISLANDS	S	COMM SPCE-CANADA	X
PHILLIPPINES REP.	S	COMM SPCE-RUSSIA	X
PHOENIX ISLANDS	S	COMM SPCE-FRANCE	X
PITCAIRN ISLAND	S	COMM SPCE-BELGIUM	X
PORTUGUESE TIMOR	S	COMM SPCE-RUSSIA	X
SIKKIM	S	COMM SPCE-USA	X
SINGAPORE REPUBLIC	S	COMMON USE (ITU)	X
SOLOMON ISLANDS	S	ELEVENTH NAV DIST	X
SRI LANKA (CEYLON)	S	FAR EAST	X
SW PACIFIC OCEAN	S	FIFTH NAV DISTRICT	X
SYCHELLES	S	FOURTH NAV DIST	X
THAILAND	S	GT LKS REGION CAP 3	X
TOKELAU ISLANDS	S	INTELSAT	X
TONGA KINGDOM	S	INTELSAT	X
TRUST TERRITORIES	S	INTELSAT	X
TUVALU	S	INTELSAT	X
UN MAG INDIA PAK	S	INTER-SHIP (ITU)X	
VANUATA (REP. OF)	S	INTERNAT WTRS	X
VIET-NAM NORTH	S	MID E REGION CAP 2	X
VIET-NAM SOUTH	S	MISSISSIPPI W OF	X
WAKE ISLAND	S	MISSISSIPPI E OF	X
WALLIS/FUTANA ISLS	S	N CE REGION CAP 5	X
WESTERN SAMOA	S	NAMIBIA	X
		NATO COUNTRIES ALL	X
ADELIE LAND	T	NE REGION CAP 1	X
AUSTRALIA COMMWLTH	T	NINTH NAV DIST	X
COCOS KEELING IS	T	NORTH AMERICA	X
CROZET ARCHIPELAGO	T	ORBITAL FLIGHTX	
GB INDO TERRITORY	T	PACIFIC OCEAN	X
INDIAN OCEAN	T	PACIFIC NORTH	X
KERGUELEN ISLANDS	T	RECEIVE ONLY RECRD	X
MAURITIUS T		SE REGION CAP 4	X
NEW ZEALAND	T	SPACE SYSTEM	X
REUNION (FRENCH)	T	SPCE RES-FRANCE	X
ST PAUL AMSTERDAM	T	SPCE MET-USA	X
		SPCE RES-FRANCE	X
SPACENON-GEOSTTNRY	U	SPCE MET-USA	X
WORLD WIDE AREA	U	SPCE RES-USA	X
WORLDWIDE	U	SPCE RES-USA	X
		SPCE RES-USA	X
USP (US AND POSS)	V	SPCE RES-SWEDEN	X
		SPCE RES-CANADA	X
SPACEGEOSTATIONARY	W	SPCE RES-JAPAN	X

SPCE RES-JAPAN	X	UN ARAB EMPIRATES	Z
SPCE RES-GERMANY	X	YEMEN ARAB REPUBLI	Z
SPCE RES-GERMANY	X	YEMEN (PEO DEM REP)	Z
SPCE RES-FRANCE	X		
SPCE RES-FRANCE	X		
SPCE RES-FRANCE	X		
SPCE MET-FRANCE	X		
SPCE RES-FRANCE	X		
SPCE RES-FRANCE	X		
SPCE RES-FRANCE	X		
SPCE MET-RUSSIA	X		
SPCE RADNAV-USA	X		
SPCE RES-FR/GERMANY	X		
SPCE RES-CANADA	X		
THIRTEENTH NAV DIS	X		
TWELTH NAV DIST	X		
UK STA IN REGION 1	X		
UK STA IN REGION 2	X		
UK STA IN REGION 3	X		
US POSSESSIONS ONLY	X		
US OCEAN STATION	X		
US (50 STATES-DC)	X		
WRLD WIDE RESTRICT	X		
CONTINENTAL US	Y		
CONUS 48 STATES DC	Y		
ADEN	Z		
AFARS/ISSAS (FRENCH)	Z		
AFGHANISTAN	Z		
ASIA SOUTHWEST	Z		
BAHRAIN, STATE OF	Z		
BELIZE	Z		
DJIBOUTI	Z		
EGYPT ARAB REPUBLI	Z		
ETHIOPIA	Z		
IRAN	Z		
IRAQ REPUBLIC	Z		
JORDAN (KINGDOM OF)	Z		
KENYA	Z		
KUWAIT (STATE OF)	Z		
MIDDLE EAST	Z		
OMAN (MUSCAT/OMAN)	Z		
PAKISTAN	Z		
PERSIAN GULF	Z		
QATAR	Z		
RED SEA	Z		
SAUDI ARABIA KINGD	Z		
SOMALI DEM REPUBLI	Z		
SOMALILAND (FRENCH)	Z		
SOMALILAND (BRITISH)	Z		
SUDAN REPUBLIC	Z		
SULTANTATE OF OMAN	Z		
TRUCIAL STATES	Z		

b. This paragraph is sorted by the state/country name.

ADELIE LAND	T	BERMUDA	K
ADEN	Z	BHUTAN	S
AEGEAN SEA	N	BHUTAN (ITU)	P
AFARS/ISSAS (FRENCH)	Z	BOLIVA L	
AFGHANISTAN	Z	BOTSWANA	P
AFRICA	P	BRAZIL	L
ALABAMA	C	BRIT WEST INDIES	K
ALASKA	G	BRUNEI	S
ALASKA ALEUTIAN IS	H	BULGARIA PEO REPUB	O
ALASKA MAIN LAND	G	BURKINA FASO	P
ALBANIA REPUBLIC	O	BURMA (UNION CF)	S
ALGERIA	P	BURUNDI KINGDOM	P
ALL	X	BYELORUSSIAN SSR	Q
AMERICAN SAMOA	S	CALIFORNIA	F
ANDORRA	N	CAMEROON REPUBLIC	P
ANGOLA	P	CANADA	J
ANGUILLA	K	CANADA EAST COAST	J
ANTARTICA	L	CANADA EASTCENTRAL	J
ANTIGUA/BARBUDA	K	CANADA NORTHEAST	J
ARABIAN SEA	X	CANADA NORTHWEST	J
ARCTIC OCEAN	X	CANADA SOUTHWEST	J
ARGENTINE REPUBLIC	L	CANADIAN OCEAN STA	X
ARIZONA	E	CANARIES	K
ARKANSAS E		CAPE VERDE ISLAND	K
ARUBA	K	CARIBBEAN	K
ASCENSION	K	CAROLINE ISLANDS	S
ASIA	S	CAYMAN ISLAND K	
ASIA SOUTH	S	CELEBES SEA	S
ASIA SOUTHEAST	S	CENTRAL AMERICA	L
ASIA SOUTHWEST	Z	CENTRL AFRICAN REP	P
ATLANTIC EAST	X	CHAD	P
ATLANTIC NORTH	X	CHAGOS ARCHIPELAGO	S
ATLANTIC OCEAN SE	P	CHESAPEAKE BAY	A
ATLANTIC OCEAN	X	CHILE (EX EASTER I)	L
ATLANTIC OCEAN NE	N	CHINA	R
ATLANTIC OCEAN NW	J	CHRISTMAS I (PAC)	S
ATLANTIC OCEAN WC	K	CHRISTMAS I INDO	S
AUSTRALIA COMMWLTH	T	CLASSIFIED LOCATIN	X
AUSTRIA	N	COCOS KEELING IS	T
AZORES	J	COLORADO	D
BAHAMAS	K	COLUMBIA REPUBLIC	L
BAHRAIN, STATE OF	Z	COMM SPCE-BELGIUM	X
BALTIC SEA	M	COMM SPCE-CANADA	X
BANGLADESH	S	COMM SPCE-FRANCE	X
BARBADOS	K	COMM SPCE-RUSSIA	X
BELGIUM	N	COMM SPCE-RUSSIA	X
BELIZE	Z	COMM SPCE-RUSSIA	X
BENIN	P	COMM SPCE-USA	X
BERING SEA	H	COMM SPCE-USA	X
BERLIN WEST	N	COMMON USE (ITU)	X
		COMORO ISLAND	S

CONGO PEO REPUBLIC	P	GT LKS REGION CAP 3	X
CONNECTICUT	A	GUADELOUPE F DEPT	K
CONTINENTAL US	Y	GUAM	S
CONUS 48 STATES DC	Y	GUATEMALA	L
COOK ISLANDS	S	GUINEA REPUBLIC	P
COOK ISLANDS (NORTH)	S	GUINES-BISSAU	P
CORSICA	N	GULF OF MEXICO	K
COSTA RICA	L	GUYANA	L
CRETE	N	GUYANA (FRENCH)	L
CROZET ARCHIPELAGO	T	HAITI REPUBLIC	K
CUBA	K	HAWAII	H
CYPRUS REPUBLIC	N	HAWAII (ITU)	H
CZECHOSLOVAKIA	O	HONDORAS REPUBLIC	L
DELAWARE	A	HONG KONG	R
DENMARK	N	HOWLAND ISLAND	S
DISTRICT OF COLUMBIA	A	HUDSON BAY	J
DJIBOUTI	Z	HUNGARIAN REPUBLIC	O
DOMINICA	K	ICELAND	J
DOMINICAN REPUBLIC	K	IDAHO	D
EASTER I (CHILE)	S	ILLINOIS	B
ECUADOR	L	INDIA REPUBLIC OF	S
EGYPT ARAB REPUBLI	Z	INDIAN OCEAN	T
EIGHTH NAV DIST	E	INDIANA	B
EL SALVADOR REP.	L	INDONESIA REPUBLIC	S
ELEVENTH NAV DIST	X	INTELSAT	X
ENGLISH CHANNEL	N	INTELSAT	X
EQUATORIAL GUINEA	P	INTELSAT	X
ETHIOPIA	Z	INTELSAT	X
EUROPE	N	INTER-SHIP (ITU)X	
FAEROES ISLANDES	J	INTERNAT WTRS	X
FALKLAND ISLANDS	K	IOWA	B
FAR EAST	X	IRAN	Z
FIFTEENTH NAV DIST	K	IRAQ REPUBLIC	Z
FIFTH NAV DISTRICT	X	IRELAND	N
FIJI ISLANDS	S	ISRAEL (STATE OF)	P
FINLAND	M	ITALY	N
FIRST NAV DISTRICT	A	IVORY COAST REPUB	P
FLORIDA	C	JAMAICA	K
FOURTEENTH NAV DIS	H	JAMMU AND KASHMIR	S
FOURTH NAV DIST	X	JAN MAYEN	J
FRANCE	N	JAPAN	R
FRENCH POLYNESIA	S	JARVIS ISLAND	S
GABON REPUBLIC	P	JOHNSTON ISLAND	H
GAMBIA (BATHURST)	P	JORDAN (KINGDOM OF)	Z
GB INDO TERRITORY	T	KANSAS	D
GEORGIA	C	KENTUCKY B	
GERMAN DEM REP	N	KENYA	Z
GERMANY	N	KERGUELEN ISLANDS	T
GHANA	P	KHMER REPUBLIC	S
GIBRALTAR	N	KIRIBATI	S
GREAT LAKES	B	KOREA REPUBLIC	R
GREECE	N	KOREA (PEOPLES REP.)	R
GREENLAND	J	KUWAIT (STATE OF)	Z
GRENADA	K	LAKE ERIE	B

LAKE HURON	B	NATO COUNTRIES ALL	X
LAKE MICHIGAN	B	NATO EUROPE ALL	N
LAKE ONTARIO	A	NAURU ISLANDS	S
LAKE SUPERIOR	B	NAV DIST WASH DC	A
LAOS KINGDOM	S	NE REGION CAP 1	X
LATIN AMERICA	L	NEBRASKA D	
LEBANON	P	NEPAL	S
LESOTHO KINGDOM OF	P	NETHERLANDS KINGDM	N
LESSER ANTILLES	K	NETHERLND ANTILLES	K
LIBERIA REPUBLIC	P	NETHLANDS N GU	S
LIBYAN ARAB REPUB	P	NEVADA	F
LIECHTENSTEIN	N	NEW CALEDONIA	S
LOUISIANA	E	NEW GUINES TERR	S
LUXEMBOURG	N	NEW HAMSPHIRE	A
MACAO	R	NEW JERSEY	A
MADAGASCAR DEM REP	P	NEW MEXICO	E
MADEIRA	K	NEW YORK A	
MAINE	A	NEW ZEALAND	T
MALAWI	P	NICARAGUA	L
MALAYSIA	S	NIGER (REPUBLIC OF)	P
MALDIVES REPUBLIC	S	NIGERIA (REPUBLIC OF)	P
MALI REPUBLIC	P	NINTH NAV DIST	X
MALTA	N	NIUE ISLAND	S
MARIANA IS (EX GUM)	S	NORTH AMERICA	X
MARION ISLAND	P	NORTH CAROLINA	C
MARSHALL ISLANDS	S	NORTH DAKOTA	D
MARTINIQUE F DEPT	K	NORTH SEA	N
MARYLAND	A	NORWAY	M
MASSACHUSETTS	A	NORWEGIAN SEA	M
MAURITANIA (REP. OF)	P	OCEANIA	S
MAURITIUS T		OHIO	B
MAYOTTE ISLAND	P	OKLAHOMA	E
MEDITERRANEAN SEA	N	OMAN (MUSCAT/OMAN)	Z
MEDITERRANEAN-EAST	N	ORBITAL FLIGHT X	
MEDITERRANEAN-WEST	N	OREGON	F
MEXICO	L	PAC REGION CAP 8	F
MICHIGAN	B	PACIFIC NORTH	X
MICRONESIA FED ST	S	PACIFIC OCEAN	X
MID E REGION CAP 2	X	PACIFIC OCEAN NE	G
MIDDLE EAST	Z	PACIFIC OCEAN NW	H
MIDWAY ISLAND	H	PACIFIC OCEAN SE	L
MINNESOTA	B	PAKISTAN	Z
MISSISSIPPI	C	PALAU REPUBLIC OF	S
MISSISSIPPI E OF	X	PALMYRA ISLAND	S
MISSISSIPPI W OF	X	PANAMA CANAL ZONE	K
MISSOURI	B	PANAMA REPUBLIC	L
MONACO	N	PAPUA NEW GUINEA	S
MONGOLIAN REPUBLIC	Q	PAPUA (TERRITORY OF)	S
MONTANA	D	PARACEL ISLANDS	S
MONTSERRAT	K	PARAGUAY	L
MOROCCO (KINGDOM OF)	P	PENNSYLVANIA	A
MOZAMBIQUE	P	PERSIAN GULF	Z
N CE REGION CAP 5	X	PERU	L
NAMIBIA	X	PHILLIPPINES REP.	S

PHOENIX ISLANDS	S	SPCE RES-FRANCE	X
PITCAIRN ISLAND	S	SPCE RES-FRANCE	X
POLAND PEO REPUBLI	O	SPCE RES-FRANCE	X
PORTUGAL	N	SPCE RES-FRANCE	X
PORTUGUESE TIMOR	S	SPCE RES-FRANCE	X
PUERTO RICO	K	SPCE RES-FRANCE	X
QATAR	Z	SPCE RES-FRANCE	X
RCKY MTN RGN. CAP 7	D	SPCE RES-GERMANY	X
RECEIVE ONLY RECRD	X	SPCE RES-GERMANY	X
RED SEA	Z	SPCE RES-JAPAN	X
REUNION (FRENCH)	T	SPCE RES-JAPAN	X
RHODE ISLAND	A	SPCE RES-SWEDEN	X
RODRIGUEZ	P	SPCE RES-USA	X
ROUMANIA SOCLT REP	O	SPCE RES-USA	X
RWANDA REPUBLIC	P	SPCE RES-USA	X
S. HELENA	K	SPITSBERGEN	M
S. PIERRE/MIQUELON	J	SRI LANKA (CEYLON)	S
S. TOME/PRINCIPE	K	ST CRISTOPH/NEVIS	K
SAINT LUCIA	K	ST PAUL AMSTERDAM	T
SAN MARINO (ITU)	P	ST VINCENT/GRENADIN	K
SARDINIA	N	SUDAN REPUBLIC	Z
SAUDI ARABIA KINGD	Z	SULTANTATE OF OMAN	Z
SE REGION CAP 4	X	SURINAM REP OF	L
SENEGAL REPUBLIC	P	SW ATLANTIC OCEAN	L
SYCHELLES	S	SW PACIFIC OCEAN	S
SICILY	N	SW REGION CAP 6	E
SIERRA LEONE	P	SWAN ISLAND	K
SIKKIM	S	SWAZILAND KINGDOM	P
SINGAPORE REPUBLIC	S	SWEDEN	M
SIXTH NAV DISTRICT	C	SWITZERLAND CONFED	N
SO AFRICA REPUBLIC	P	SYRIAN ARAB REP.	P
SOLOMON ISLANDS	S	TANZANIA (ITU)	P
SOMALI DEM REPUBLI	Z	TANZANIA REPUBLIC	P
SOMALILAND (BRITISH)	Z	TANZANIA (ZANZIBAR)	P
SOMALILAND (FRENCH)	Z	TENNESSEE	C
SOUTH AMERICA	L	TENTH NAV DISTRICT	K
SOUTH CAROLINA	C	TEXAS	E
SOUTH CHINA SEA	R	THAILAND	S
SOUTH DAKOTA	D	THIRD NAV DISTRICT	A
SP TER NE MOROCCO	P	THIRTEENTH NAV DIS	X
SPACE SYSTEM	X	TOGOLESE REPUBLIC	P
SPACEGEOSTATIONARY	W	TOKELAU ISLANDS	S
SPACENON-GEOSTTNR	U	TONGA KINGDOM	S
SPAIN	N	TRINIDAD/TOBAGO	K
SPANISH SAHARIAN T	P	TRISTAN DA CUNHA	K
SPCE MET-FRANCE	X	TRUCIAL STATES	Z
SPCE MET-RUSSIA	X	TRUST TERRITORIES	S
SPCE MET-USA	X	TUNISIA	P
SPCE MET-USA	X	TURKEY	N
SPCE RADNAV-USA	X	TURKS/CAICOS IS.	K
SPCE RES-CANADA	X	TUVALU	S
SPCE RES-CANADA	X	TWELTH NAV DIST	X
SPCE RES-FR/GERMANY	X	UGANDA	P
SPCE RES-FRANCE	X	UK GREAT BRITAIN	N

UK STA IN REGION 1	X
UK STA IN REGION 2	X
UK STA IN REGION 3	X
UKRAINIAN SSR	Q
UN ARAB EMPIRATES	Z
UN MAG INDIA PAK	S
UN TRUCE SUPER JER	P
URUGUAY REPUBLIC	L
US (50 STATES-DC)	X
US OCEAN STATION	X
US POSSESSIONS ONLY	X
USP (US AND POSS)	V
USSR	Q
UTAH	D
VANUATA (REP. OF)	S
VATICAN CITY STATE	N
VENEZUELA REPUBLIC	L
VERMONT	A
VIET-NAM NORTH	S
VIET-NAM SOUTH	S
VIRGIN IS BR. (ITU)	K
VIRGIN IS US (ITU)	K
VIRGIN ISLANDS	K
VIRGINIA	A
WAKE ISLAND	S
WALLIS/FUTANA ISLS	S
WASHINGTON	F
WEST VIRGINIA	A
WESTERN SAMOA	S
WISCONSIN	B
WORLDWIDE	U
WORLD WIDE AREA	U
WRLD WIDE RESTRICT	X
WYOMING	D
YEMEN ARAB REPUBLI	Z
YEMEN (PEO DEM REP)	Z
YOGOSLAVIA	O
ZAIRE	P
ZAIRE	P
ZAMBIA REPUBLIC	P
ZIMBABWE (REP. OF)	P

ANNEX F – IRAC-APPROVED RECORD NOTES

IRAC Coordination (C), Emission (E), Limitation (L), Priority (P) and Special (S) record notes are used in Data Item 500. IRAC Minute (M) notes are used in Data Item 501.

Coordination Notes

C002--Subject to coordination with the Western Area Frequency Coordinator located at the Navy Pacific Missile Test Center, Pt. Mugu, Cal., prior to use within a 322 kilometer radius of Pt. Mugu or in California south of Latitude 37°30' North.

C003--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Western Area Frequency Coordinator (WAFC) who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the WAFC as necessary to ensure compatibility with existing uses.

C004--Subject to coordination with the Eastern Area Frequency Coordinator located at Patrick AFB, Florida, prior to use within the area bounded by 24°N31°30'N and 77°W 83°W.

C005--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Eastern Area Frequency Coordinator, Patrick AFB, Florida, who also coordinated it, as appropriate, with Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the Eastern AFC, Patrick AFB, Florida, as necessary to ensure compatibility with existing uses.

C006--Subject to coordination with the Area Frequency Coordinator located at White Sands Missile Range, New Mexico, prior to use in the State of New Mexico or other U.S. territory within a 240 kilometer radius of WSMR plus the area of Utah and Colorado that lies south of 41° North and between 108° and 111° West. Phone: 505-678-5417 or 3702, AUTOVON: 258-5417 or 3702.

C007--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Area Frequency Coordinator, WSMR, New Mexico, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the AFC, WSMR, New Mexico, as necessary to ensure compatibility with the existing uses.

C008--Subject to Coordination with the Area Frequency Coordinator located at the Army Electronic Proving Ground, Ft. Huachuca, Arizona, prior to use within the State of Arizona. Phone: 602-538-6423, Autovon: 879-6423.

C009--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Area Frequency Coordinator, Ft. Huachuca, Arizona, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the AFC, Ft. Huachuca, as necessary to ensure compatibility with existing uses.

C010--Subject to coordination with the Gulf Area Frequency Coordinator located at Eglin AFB, Florida, prior to use within the area bounded by 27°N 33°30'N and 83°W 90°W.

C011--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Gulf Area Frequency Coordinator, Eglin AFB, Florida, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the Gulf AFC, Eglin AFB, Florida, as necessary to ensure compatibility with existing uses.

C012--Subject to prior coordination with the Joint Frequency Management Office located at the Commander in Chief Pacific Headquarters, Camp H. M. Smith, Hawaii 96861.

C013--Subject to local coordination with Frequency Manager, AFFTC, Edwards AFB, California.

C015--Subject to prior coordination with Frequency Manager, Air Force Space and Missile Technical Center, Vandenberg AFB, California.

C016--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the HQ USAF Frequency Coordinator, Arlington, VA., who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the HQ USAF Frequency Coordinator, Arlington, VA., as necessary to ensure compatibility with existing uses.

C019--Subject to prior coordination with Army Frequency Management Office (AFMO) - CONUS, ATTN: SFIS-FAC-SC, Ft. Sam Houston, Texas 78234-5000. Phone: 210-221-2820/2050; DSN: 471-2820/2050.

C022--Subject to prior coordination with Frequency Manager, Army Missile Command, Huntsville, Alabama.

C024--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to its authorization with AFMO CONUS, Ft. Sam Houston, Texas, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with AFMO CONUS, Ft. Sam Houston, Texas, as necessary to ensure compatibility with existing uses.

C026--Subject to prior coordination with DOE Frequency Coordinator for Albuquerque Operations Office. Phone 575-3458, FTS, or (702) 295-3458, Commercial, or 575-3343, FTS, (702) 295-3343, Commercial (weekends, holidays, and off-duty hours).

C027--Subject to prior coordination with DOE Area Frequency Coordinator, Las Vegas, Nevada, when used within the State of Nevada or within a 160 kilometer radius of Mercury or Tonopah, Nevada. Phone 575-3458 or 1162 FTS, 702-295-3458 or 1162 Commercial, and 575-3343 FTS or, 702-295-3343 Commercial (weekends, holidays, and off-duty hours).

C028--Subject to prior coordination with DOE Frequency Coordinator for Albuquerque Operations Office when used in a 160 kilometer radius of Albuquerque, New Mexico. Phone 757-3458, FTS, or (702) 295-3458, Commercial, and 575-3343, FTS, (702) 295-3343, Commercial (weekends, holidays, and off-duty hours).

C030--The Department of Commerce is designated as control for Government use of this frequency. Use under this assignment is subject to initial coordination with, and subsequent coordination as indicated by, Radio Frequency Coordinator S.I.G. Research Facilities Center, NOAA, Department of Commerce, P. O. Box 520197, Miami, Florida 33152. Phone 305-526-2936 (FTS 350-2936).

C031--Subject to prior coordination with FAA Eastern Regional Office, JFK International Airport, New York 11430, Attn: Frequency Management Office. Phone 718-712-8343.

C032--Subject to prior coordination with FAA Southern Regional Office, P. O. Box 20636, Atlanta, Georgia 30344, Attn: Frequency Management Office. Phone 404-763-7385/6.

C033--Subject to prior coordination with FAA Central Regional Office, 601 East 12th Street, Kansas City, Missouri 64106, Attn: Frequency Management Office. Phone 816-426-5647.

C034--Subject to prior coordination with FAA Southwest Regional Office, 4400 Blue Mound, Fort Worth, Texas 76193-0483, Attn: Frequency Management Office. Phone 817-740-3237.

C035--Subject to prior coordination with FAA Western Regional Office, P.O. Box 92007, Worldway Center, Los Angeles, California 90009, Attn: Frequency Management Office. Phone 310-297-1872.

C036--Subject to prior coordination with FAA Alaskan Regional Office, 222 West 7th Ave., Anchorage, Alaska 99513. Phone 907-243-7246 or 4399.

C037--Subject to prior coordination with FAA Western Pacific Regional Office, Honolulu ARTCC, P.O. Box 50109, Honolulu, Hawaii 96850-4983 Attn: Frequency Management Office. Phone 808-541-1241.

C038--Subject to prior coordination with FAA New England Regional Office, 12 New England Executive Park, Burlington, Massachusetts 01803. Phone 617-273-7177.

C039--Subject to prior coordination with FAA Great Lakes Regional Office, 2300 East Devon Avenue, Des Plaines, Illinois 60018. Phone 312-694-7071.

C041--Subject to prior coordination with FAA Northwest Regional Office, 1601 Lind Avenue, S.W., Renton, Washington 98055-4056. Phone 206-227-2464.

C042--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Northwest Coordinator, Seattle, Washington. Use of this frequency or band under the authority of this assignment is subject to such further coordination with the FAA Northwest Coordinator, Seattle, Washington, as necessary to ensure compatibility.

bility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Northwest regional coordination has been accomplished.

C043--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Western Coordinator, Los Angeles, California. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Western Coordinator, Los Angeles, California, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Western regional coordination has been accomplished.

C045--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Central Coordinator, Kansas City, Missouri. Use of this frequency or band under the authority of this assignment is subject to such further coordination with the FAA Central Coordinator, Kansas City, Missouri, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Central regional coordination has been accomplished.

C046--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Southwest Coordinator, Ft. Worth, Texas. Use of this frequency or band under the authority of this assignment is subject to such further coordination with the FAA Southwest Coordinator, Ft. Worth, Texas, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Southwest regional coordination has been accomplished.

C047--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Great Lakes Coordinator, Des Plaines, Illinois. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Great Lakes Coordinator, Des Plaines, Illinois, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Great Lakes regional coordination has been accomplished.

C048--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Southern Coordinator, Atlanta, Georgia. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Southern Coordinator, Atlanta, Georgia, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Southern regional coordination has been accomplished.

C049--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Eastern Coordinator, New York, New York. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Eastern Coordinator, New York, New York, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Eastern regional coordination has been accomplished.

C050--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA New England Coordinator, Burlington, Massachusetts. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA New England Coordinator, Burlington, Massachusetts, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA New England regional coordination has been accomplished.

C052--Subject to local coordination with FCC Engineer-in-Charge to avoid interference to non-Government services.

C057--Subject to prior coordination with NASA Spectrum Manager, Johnson Space Center, Houston, Texas. Telephone: (FTS) 525-0122 or (commercial) 713-483-0122.

C060--Prior to operational use, this frequency assignment must be coordinated with and concurred by the commander of the military installation listed.

C061--Operational use of this frequency assignment has been coordinated with and concurred by the commander of the military installation listed.

C062--DOE use of this frequency for telemetering is subject to prior coordination at the national level with agencies having assignments in the same band and will be subject, at the time of such coordination, to adjustment to preclude harmful interference.

C064--All transmissions to NASA's ATS-1 through 5 Satellites shall be coordinated and scheduled with the ATS Project Manager or the ATS Experiments Manager, ATS 1/5, Lewis Research Center, Cleveland, Ohio 44135. Telephone: (216) 433-3483 or 433-3570.

C065--Subject to coordination, prior to use, with the Department of the Interior, Bureau of Land Management, National Interagency Fire Center, Boise, Idaho. Telephone: (208) 387-5644.

C067--Subject to coordination with the Area Frequency Coordinator located at Nellis AFB, Nevada, prior to use in the states of Nevada, Utah west of 111°W and Idaho south of 44°N.

C068--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Area Frequency Coordinator, Nellis AFB, Nevada, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the AFC as necessary to ensure compatibility with existing uses.

C069--Subject to coordination and scheduling with Mr. Carl Staton; National Environmental Satellite, Data, and Information Service; U.S. Department of Commerce; Chief, Data Collection and Direct Broadcast Branch (E/SP21); Washington, D.C. 20233; telephone (301) 763-8326.

C071--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Alaskan Coordinator, Anchorage, Alaska. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Alaskan Coordinator, Anchorage, Alaska, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Alaskan regional coordination has been accomplished.

C072--This frequency assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900 or 9000-9200 MHz was coordinated prior to authorization with the FAA Pacific Coordinator, Honolulu, Hawaii. Use of the frequency or band under the authority of this assignment is subject to such further coordination with the FAA Pacific Coordinator, Honolulu, Hawaii, as necessary to ensure compatibility with existing uses. This Note applied to an Aeronautical Assignment Group (AAG) frequency (see Section 1.4.1 of the NTIA Manual) indicates FAA Pacific regional coordination has been accomplished.

C073--Subject to prior coordination with NASA Spectrum Manager, Wallops Flight Center, Wallops Island, Virginia. Telephone: (FTS) 8-889-1278 or commercial 804-824-1278.

C074--Operational activities should be coordinated with NASA Spectrum Manager responsible for JPL/Goldstone Programs. Mail: 4800 Oak Grove Drive, Mail Stop 303-404, Pasadena, CA 91109. Telephone: (FTS) 8-792-0068 or (commercial) 818-354-0068.

C075--This assignment has been coordinated with the Hydrology Committee in accordance with Section 8.3.6.

C076--This assignment has been coordinated with the Radio Spectrum Manager, National Science Foundation, 1800 G St., N.W., Washington, D.C. 20550. Telephone: (202) 357-9696 in accordance with Section 8.3.7, for the band 1660-1670 MHz, or Section 8.3.19.

C078--The domestic fixed aspects of this assignment have been coordinated with NTIA in accordance with Section 8.2.11 of the NTIA manual.

C079--Subject to prior coordination with DOE Frequency Coordinator, Bonneville Power Administration, Portland, Bonneville Power Administration, Portland, Oregon, phone 503-234-3361, ext. 4368, when used within the states of Washington, Oregon, Idaho or Montana West of 112W.

C080--Subject to prior coordination with the Department of the Interior, U.S. Geological Survey, Earthquakes Hazards Team, Seismology Section, Menlo Park, CA, Communications Coordinator, (415) 329-4780 or 4727, and subject to adjustment in the event of interference to Interior operations within the same splinter channel (Section 4.3.7).

C081--This assignment is for a station in the National Radio Quiet Zone. Successful coordination has been effected in accordance with Section 8.3.9 of the NTIA Manual.

C085--Subject to prior coordination with Army Frequency Coordinator, Military District of Washington, ATTN: ASNK-OPB, Fort Lesley J. McNair, Washington, D.C. 20319-5050. Phone 202-475-2554 or 2486, Autovon 335-2554 or 2486.

C086--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated prior to authorization with the Mid-Atlantic Area Frequency Coordinator, Patuxent River, Maryland, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the AFC as necessary to ensure compatibility with existing uses.

C088--Prior to use, this frequency assignment must be scheduled with the Post Frequency Manager, Aberdeen Proving Ground, MD. Telephone: 410-278-7591; DSN 298-7591.

C089--This frequency assignment was coordinated prior to authorization with FAA Headquarters, 800 Independence Avenue, S.W., Washington, D.C. 20591. Phone: 202-267-8699.

C090--In the band 162 to 174 MHz, subject to coordination with adjacent channel users (bandwidth >11 kHz) prior to establishing a station on an interstitial channel under S322 procedures. This note is automatically deleted on January 1, 2005.

C091--This frequency assignment in one of the bands 1435-1535 or 2310-2390 MHz was coordinated with the following Area Frequency Coordinators: Western Area Frequency Coordinator, Point Mugu, California; Eastern Area Frequency Coordinator, Patrick AFB, Florida; Area Frequency Coordinator, White Sands Missile Range, New Mexico; Area Frequency Coordinator, Fort Huachuca, Arizona; Gulf Area Frequency Coordinator, Eglin AFB, Florida; HQ USAF Frequency Coordinator, Washington DC; Army Frequency Coordinator, Fort Sam Houston, Texas; Area Frequency Coordinator, Nellis AFB, Nevada; Mid-Atlantic Area Frequency Coordinator, Patuxent River, Maryland. This assignment was also coordinated with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the appropriate AFC as necessary to ensure compatibility with existing uses.

Emission Notes

E013--A3 emission authorized for secondary and intermittent operation.

E023--F3 emission authorized for maintenance and test communications only.

E028--Lower sideband transmission. The carrier is higher than the assigned frequency shown by one half of the indicated bandwidth.³

E029--Upper sideband transmission. The carrier is lower than the assigned frequency shown by one half of the indicated bandwidth.

E030--Lower sideband greater. The suppressed carrier is higher than the assigned frequency shown by 1.5 kHz.⁴

E031--Upper sideband greater. The suppressed carrier is lower than the assigned frequency shown by 1.5 kHz.²

E032--Lower sideband greater. The suppressed carrier is higher than the assigned frequency shown by .5 kHz.²

E033--Upper sideband greater. The suppressed carrier is lower than the assigned frequency shown by .5 kHz.²

E035--Lower sideband transmission.¹

E036--Upper sideband transmission.¹

E037--Full-carrier SSB emission (3KH3E) shall be used except (1) when it is known that the receiving station is capable of receiving suppressed-carrier emission (3KJ3E) and (2) upon request of any station using the same carrier frequency (Ref: FCC 87.67b).

E038--When a single sideband emission is used from the various emissions shown on this HF assignment, the carrier frequency will be set to place the center of intelligence at the assigned frequency.

E039--The authorized emission bandwidth shall be so located within the band that it does not extend beyond the upper or lower limits of the authorized band shown in the *FRB entry of circuit remarks. If a portion(s) of the authorized band is to be excluded (*FBE) the authorized emission bandwidth must not extend into any portion(s) of the excluded band(s).

Limitation Notes

L2--Restricted to (daytime, nighttime, or indicated hours of operation.) Wherever used herein the term daytime means from two hours after local sunrise until two hours before local sunset. The term nighttime only means from two hours prior to local sunset until two hours after local sunrise at (a) specified point(s). Local time at transmitter is applicable unless otherwise specified.

L3--For communication with _____ stations only.

L012--To be used only in an emergency jeopardizing life, public safety, or important property under conditions calling for immediate communication where other means of communication do not exist or are temporarily disrupted or inadequate. To insure that radio equipment for emergency use is maintained in satisfactory operating condition, testing on such frequencies is permitted, provided that insofar as practica-

ble, transmitters shall be tested with a non-radiating load and the test use of a radiating antenna held to a minimum and provided further that such testing shall be restricted to test message traffic and shall not include operator training.

L109--Restricted to non-air carrier operations normally unavailable to military aircraft.

L113--L012 FX

L116--L2 daytime

L121--L2 daytime Hawaii and westward

L125--L2 local sunrise to local sunset

L127--L2 local sunset to local sunrise

L131--L2 nighttime

L168--L3 GCA or approach control

L171--L3 Agriculture

L174--L3 Army

L177--L3 Federal Aviation Administration

L180--L3 Coast Guard

L182--L3 Interior

L187--L3 Military

L188--L3 Military aircraft or aircraft authorized for military use

L190--L3 Navy

L192--L3 non-Government

L193--L3 non-Government aircraft

L195--L3 non-Government coast stations

L197--L3 non-Government public correspondence

L199--L3 non-Government ships

L201--L3 public correspondence

L203--L3 U.S. Army Engineers

L207--L3 civil aircraft

L242--L2 1300-2300 GMT

L255--L2 0200-0730 GMT

L256--L2 0200-0800 GMT and 1800-2300 GMT

L257--L2 0600-2100 GMT

L278--L2 0200-1100 GMT

L282--This assignment is for "back-up" use only when regular channels are either temporarily disrupted or inadequate.

L283--Limited to communications in or near a port, or in locks or waterways, between coast stations and ship stations, or between ship stations, in which messages are restricted to those related to the operational handling, the movement and the safety of ships, and, in emergency, to the safety of persons. Messages which are of a public correspondence nature shall be excluded.

L294--L2 1400-2200 GMT

L298--Limited to communications with CAP radio stations when engaged in training or on an actual CAP mission in support of USAF.

L304--L2 1500-0800 GMT April through September; 1800-0500 GMT October through March

L308--L3 Commerce

L309--L012 FB

L318--Authority under this assignment is limited to temporary periods and locations for telemetry of seismic data.

L330--This assignment is limited to communications with non-Government ships for the exchange of traffic dealing with safety of life or property when other means of communication are not practicable.

L331--L2 0900-1300 and 1400-1600 GMT

L332--L2 2200-0300 GMT

L334--L2 0330-1830 GMT

L336--L2 1000-1700 GMT

L339--L2 1200-0300 GMT

L341--Limited to operations conducted in accordance with Bridge-to-Bridge portion of Section 8.2.29 of the NTIA Manual

L343--L3 Tennessee Valley Authority

L347--L2 2330-2230 GMT

L350--Limited to use from November 15 to April 1.
L351--L2 2000-1000 GMT
L353--L2 0100-0600 Local
L355--Limited to ground transmissions only.
L356--Mobile transmissions allowed only in accordance with Section 7.5.5 of the NTIA Manual.
L357--This band assignment is authorized only for air/ground frequency assignment in the AAG/MAG bands (118-137 MHz and those frequencies utilized by the FAA for air traffic control in the 225-328.6 and 335.4-400 MHz band) and is for "back-up" use only when regular channels are either temporarily disrupted or inadequate. Actual frequencies will be listed in Agency Remarks.
L358--L2 1300-2200 GMT

"M"--Notes

M001--A note concerning this assignment is recorded in the minutes of the FAS meeting at which the application was approved. The source of the note is identified in the CIRCUIT REMARKS field (*NTS).

M002--This assignment was coordinated with IRAC or NTIA, and/or is subject to the conditions stated in the letter, the IRAC Document, the FAS Docket, or the FCC Regulation referenced in the CIRCUIT REMARKS field (*NTS).

M003--Subject to coordination prior to activation and, as appropriate, possible scheduling with the activity(ies) or station(s) listed in the CIRCUIT REMARKS field (*NTS).

M004--Subject to coordination prior to activation and, as appropriate, possible scheduling with the activity(ies) listed in the CIRCUIT REMARKS field (*NTS) when used within interference range of such activity(ies) or station(s).

M006--Subject to coordination prior to activation with the National Weather Service Meteorologist-In-Charge at the location(s) listed in the CIRCUIT REMARKS field (*NTS).

M007--Subject to notification of activation to the agency or activity listed in the CIRCUIT REMARKS field (*NTS).

M008--Operations under the authority of this assignment are subject to immediate adjustment, including cessation, if they result in harmful interference to the operations listed in the CIRCUIT REMARKS field (*NTS).

M009--Operations under the authority of this assignment a) are on a noninterference basis to the operations of the agency listed in the CIRCUIT REMARKS field (*NTS) on the same or adjacent channel and b) no protection can be afforded by that agency.

M010--This assignment was agreed to on a nonrenewable basis by the agency identified in the CIRCUIT REMARKS field (*NTS).

M011--Limited to the non-broadcast hours of and subject to coordination prior to activation with the station(s) listed in the CIRCUIT REMARKS field (*NTS).

M013--Subject to prior coordination with and concurrence by the organization/official listed in the CIRCUIT REMARKS field (*NTS) and to temporary cessation when required for marine environmental operations.

M014--During transmission, aircraft shall not exceed the altitude listed in the CIRCUIT REMARKS field (*NTS).

M015--The system using this assignment was reviewed by the SPS in accordance with Chapter 10 and the assignment is being made subject to conditions stated in the IRAC and SPS documents referenced in the CIRCUIT REMARKS field (*NTS).

M016--This assignment, made pursuant to Resolution 8 of the GWARC-79, is for planning purposes and is not an authority to operate. Operations may commence after satisfactory replacement action has been completed for (FAS DKT number(s)--optional: freq, agency serial number), and/or after (XXYY) (Date agreed to by displaced agency).

M017--This non-Government space station assignment is made with the understanding that protection cannot be guaranteed to reception of the non-Government earth station(s) identified in the CIRCUIT REMARKS field (*NTS) due to the operation of existing transmitting earth stations and/or Government fixed stations.

Priority Notes

P032--Noninterference basis

P074--Not to preclude expansion and adjustment of operations within the band 162.0 to 174.0 MHz by non-military Government agencies

P076--Not to preclude expansion and adjustment of operations within the band 406.1 to 420.0 MHz by non-military Government agencies.

Special Notes

S012--This operation does not include operator qualification training, but is a periodic operation of a communications system manned by fully qualified operators who are military reservists or affiliates. Except in emergencies, this frequency assignment will not be used as a means for passing traffic that in the absence of this authorization would require delivery by other means.

S015--Remote control

S017--This assignment is for the training of personnel in the technique and operational aspects of the electronic equipment.

S032--Common simplex channel for emergency and distress communications only. Available to all stations operating in or with aeronautical services.

S034--Disaster communications

S035--Distress, safety and calling

S038--FAC operation simultaneous with RLL

S041--For calibrating direction finders

S043--For emergency use at scene of air sea rescue

S047--For transmission of hydrologic and meteorological data

S048--For transmission of hydrologic data

S059--Radio direction finding

S063--Search and rescue communications

S067--Subject to Department to the Interior, Bureau of Indian Affairs net control

S068--Subject to immediate shutdown as needs of service may dictate

S070--Subject to immediate cancellation upon notice from FCC

S085--Training and testing operations

S120--Intermittent equipment tests

S139--Transmissions on this frequency will be discontinued upon receipt of notification to the effect that harmful interference is being caused to the international broadcasting service.

S141--This U.S. Government record is outside of the US&P and therefore does not fall within the jurisdiction of the NTIA and IRAC/FAS. This record is incorporated into the Government Master File for spectrum management, analysis and information purposes and does not constitute NTIA authority to transmit.

S142--Drone Control

S144--This assignment is not in complete conformity with the National Table of Frequency Allocations. Those operations that are conducted under the non-conforming portions of this assignment are on a secondary basis to operations conducted under assignments that are in conformity with the National Table of Frequency Allocations.

S145--This frequency is subject to adjustment upon notice from the Military.

S147--These frequencies are used for a very short time only during actual nuclear test or dry runs prior to actual test. Such use of frequencies will be on a secondary basis subject to the avoidance of harmful interference to all operations established in accordance with international allocations applicable to these frequencies and to all other operations regularly authorized within the United States and Possessions on specific frequencies within these bands.

S148--This is an assignment for domestic service use in providing instantaneous transmission of vital emergency, operational command and alerting traffic of such importance as to affect the immediate survival and defense of the Nation. Circuits utilizing this frequency will be maintained in an operational status at all times, with on-the-air test transmissions to insure the highest degree of readiness. This assignment requires protection commensurate with the importance of the communications for which the circuit is intended.

S149--Any use of this assignment that is not at a transient location or that is for a period exceeding 15 days shall be notified to the FAS.

S154--Scene of disaster frequency

S155--For interception and retransmission of television signals

S157--Non-Government service

S159--U. S. Government short-distance low-power service

S160--This assignment has been made pursuant to Part 7.12 of the NTIA Manual and has been coordinated in accordance with Section 8.3.3.

S164--This assignment is not in complete conformity with the National Table of Frequency Allocations. Nevertheless, in the national interest, it is on an equal basis with assignments that are in conformity with the National Table of Frequency Allocations.

S165--This assignment has been made pursuant to Section 7.5.2 of the NTIA Manual for communication with non-Government stations in the maritime mobile service.

S170--Authorized additionally in tactical and training operations when employing single sideband equipment with 3KH3E, 4KJ7B, 4KJ9W emissions for use with peak envelope powers not to exceed 2000 watts. In such operations the following additional conditions are applicable. All necessary emissions under the several modes of operation, including reduced carriers, shall be within " 3 kHz of the listed frequency. If harmful interference is caused to authorized operations, the power of this operation will be reduced to the mean power shown for this listing. In the determination of particular listed frequencies and associated carrier frequencies to meet individual tactical needs, due consideration will be given, particularly when utilizing powers in excess of the powers normally authorized on this frequency, to the avoidance of harmful interference to radio services authorized on the same or adjacent frequencies. With respect to the conduct of peacetime training operations, such use of the frequency is on a non-interference basis to the authorized operations of other agencies.

S171--Authorized additionally in tactical and training operations when employing single sideband equipment with 3KH3E, 4KJ7B, 4KJ9W emissions for use with peak envelope powers not to exceed 400 watts. In such operations the following additional conditions are applicable. All necessary emissions under the several modes of operation, including reduced carriers, shall be within " 3 kHz of the listed frequency. If harmful interference is caused to authorized operations, the power of this operation will be reduced to the mean power shown for this listing. In the determination of particular listed frequencies and associated carrier frequencies to meet individual tactical needs, due consideration will be given, particularly when utilizing powers in excess of the powers normally authorized on this frequency, to the avoidance of harmful interference to radio services authorized on the same or adjacent frequencies. With respect to the conduct of peacetime training operations, such use of the frequency is on a non-interference basis to the authorized operations of other agencies.

S179--Power shown is for emergencies only. Normal power is 4 kW or less.

S181--This assignment was authorized pursuant to Public Law 87-795.

S185--Secondary service. Maximum number of transmitters authorized: 10

S186--Power shown is for intermittent or emergency use. Normal power is 20 kW.

S187--Power shown is for emergency use. Normal power is 2.5 kW.

S189--Tactical and/or training operations

S195--Safety Communications.

S199--Navy operations authorized by assignments bearing this note shall not cause harmful interference to those non-Government operations existing at the time of authorization. The Navy agrees to make such adjustments of its group of high frequency coast telegraph assignments bearing this note as may be necessary to accommodate necessary expansion or adjustment of the non-Government coast telegraph service.

S200--JCS communication circuit

S205--Civil defense network

S206--This assignment is for an operation for which other telecommunication facilities do not exist, are inadequate, or are impracticable of installation, and for which the use of frequencies above 30 MHz is not practicable. This note applies to FX or AX station classes only.

S208--This assignment is for the domestic haul of overseas traffic in transit or destined for the United States, for an operation where technical and operational requirements dictate such use. The domestic radio haul is a segment of the overall overseas radio system.

S211--50 kW mean power used during emergency or unusually poor propagation conditions. 10 kW mean power used during normal conditions. 2.5 kW mean power used during unusually good propagation conditions.

S219--Power shown is for emergency use. Normal power is 3 kW.

S227--Power shown is for emergency use. Normal power is 1.5 kW.

S233--This assignment is part of a frequency pool, and, with Department of State approval, it may be used by foreign embassies that are authorized the use of other frequency assignments under Public Law 87-795.

S242--The NASA Unified S-band system operates in the 2270-2290 MHz portion of the 2200-2290 MHz space telemetering band on a shared basis. This system will be utilized in space missions of extended duration. In certain geographical areas agencies conducting telemetering operations on the shared frequencies in the 2270-2290 MHz band may be requested by NASA to adjust such operations as necessary to support the space mission involved.

S264--This assignment will not be used except in the event that full-scale atmospheric nuclear testing is resumed, and it is further subject to prior coordination with CINCPAC.

S265--Transmissions shall be directed so as to avoid harmful interference to FAA stations in the Edwards AFB area.

S267--Required for use in emergency areas when required to make initial contact with RACES units. Also for communications with RACES stations on matters requiring coordination.

S279--This listing represents a use of a laser(s) for telecommunication purposes and it is entered in the Government Master File (GMF) for information.

S286--The Coast Guard agrees to make such adjustments in its coast telegraph operations as necessary to provide an accommodation for non-Government coast radiotelegraph operations anticipated by the designation of this frequency in Part 81, FCC Rules.

S288--This frequency assignment is to support the National Command Authority. Circuits utilizing this frequency will be maintained in operational status at all times.

S291--Operations are subject to compliance with FCC Rules and Regulations Part 87, subpart c. Advisory service shall be given to any private aircraft upon request. The use of this frequency shall not be a deterrent to the establishment of a non-Government advisory station in this area. Operations on this frequency shall cease upon the establishment of non-Government facilities or upon notice of harmful interference thereto.

S292--Not to be a bar to complete operational implementation of common system aids to Air Navigation.

S296--Not to preclude assignment of this frequency to other agencies at specific locations.

S298--Subject to Department of the Interior, U.S. Fish and Wildlife Service net control.

S299--Power shown is into a buried vertical dipole. ERP is approximately 1 kW.

S301--Operations under the authority of this assignment a) are not protected from harmful interference which may be caused by authorized stations operating in accordance with the National Table of Frequency Allocations and b) are subject to immediate adjustment, including cessation, if they result in harmful interference to authorized stations operating in accordance with that table.

S302--Subject to the understanding that equipment will not be developed for operational use in this band.

S303--Subject to the understanding that there is not intended operational use of this equipment within USP.

S321--This assignment is for planning purposes not to exceed 3 years (see Section 9.6.5). The Note will be deleted after the assignment has been activated or this assignment will be deleted after specific locations have been notified.

S322--Stations established under the authority of this assignment shall conform to its technical particulars and shall be notified, as specified in Section 9.1.3 of the NTIA Manual, for inclusion in the list of Frequency Assignment to Government Radio Stations.

S323--This assignment is for use in a system, or research and development looking toward such a system, for which funds have been committed for Stage 1 (Planning [conceptual]), as defined in Section 10.3.1 of the NTIA Manual prior to January 1, 1973. Follow-on stages in the system life cycle are subject to the provisions of Part 10.3 of the NTIA Manual.

S324--This assignment is for use in a system, or research and development looking toward such a system, for which funds had been committed for Stage 2 (Experimentation), as defined in Section 10.3.1 of the NTIA Manual, prior to January 1, 1973. Follow-on stages in the system life cycle are subject to the provisions of Part 10.3 of the NTIA Manual.

S325--This assignment is for use in a system, or research and development looking toward such a system, for which funds had been committed for Stage 3 (Development), as defined in Section 10.3.1 of the NTIA Manual, prior to January 1, 1973. Follow-on stages in the system life cycle are subject to the provisions of Part 10.3 of the NTIA Manual.

S326--This assignment is for use in a system, or research and development looking toward such a system, for which funds had been committed for Stage 4 (Procurement), as defined in Section 10.3.1 of the NTIA Manual, prior to January 1, 1973.

S327--Marine environmental protection command/control/surveillance operations. Authorized additionally for other maritime mobile operations when not required for marine environmental purposes.

S328--This assignment is not planned for renewal. It has been replaced by another assignment.

S330--The equipment nomenclature or appropriate equipment coding is to be provided within six months after activation of the authorized station/s.

S334--Subject to Department of the Interior, Bureau of Land Management net control.

S335--This telemetry assignment is on a non-interference, nonprotected basis as concerns assignments in the aeronautical mobile service.

S337--This ITU Appendix 18 frequency for public correspondence from ships to coast stations is assigned to a remote Coast Guard lighthouse because it has no other means for entering the RCA ALSCOM System.

S340--To be used in support of DOE scientific missions with protected status for short periods of time during actual operations. Such use will require coordination between the DOD and DOE and will be on a scheduled basis.

S341--Subject to the continued applicability of note P074, this WSMR assignment is exempt from the requirement to be converted to a frequency listed in Section 4.3.7, NTIA Manual.

S343--Within the areas listed in footnote US117 in the National Table of Frequency Allocations, operations under the authority of this assignment, other than those of mobile stations, are subject to prior coordination with the Secretary of the Committee on Radio Frequencies of the National Academy of Sciences.

S344--This assignment has been granted a waiver and need not comply to the provisions of Section 8.2.20 of the NTIA Manual

S345--DOE operations in the band 4400-4990 MHz under this authority will be for emergency deployment of the NEST system. For such use in a given area, DOE will select clear channels based upon current GMF records. If time permits, DOE will coordinate specific frequencies with the appropriate military frequency managers/coordinators in the field. Tests and training will not be conducted under this authority; frequency applications for such operations will be submitted to the FAS/IRAC on a case by case basis.

S346--This FAA assignment in the band 118- 136 MHz is for standby equipment and is used interchangeably with a co-channel assignment at a separate site.

S348--Operations are subject to compliance with FCC Rules and Regulations, Part 95, Subpart D. Transmitters may be operated only by employees of the Federal Government only for the purpose of interfacing with Non-Government licensees to coordinate essential and mutual activities. This authority may be revoked by the Federal Communications Commission in its discretion at any time.

S349--Not to preclude assignment of this frequency outside of normal land mobile interference range (excluding skip and sporadic E reflection etc.) of DOE receive stations.

S350--In the frequency band 30-400 MHz for this FAC operation, power shown is for primary equipment. Back-up equipment has been engineered and installed with output power up to 35 watts. Use of this back-up equipment is authorized during emergencies and/or failure of primary equipment.

S351--This assignment is planned for implementation or deletion as a consolidation of frequencies being used.

S352--This assignment is for intermittent wide area requirements of transient, itinerant nature pursuant to Section 4.2.3 of the Manual.

S353--This assignment is for a common user frequency pursuant to Section 4.2.4 of the Manual.

S354--This planned assignment is for a Space Project that has been approved in principle by NTIA in the research/development phase. Some operational characteristics have not been determined. This listing does not provide authority to transmit.

S357--Power shown is for emergencies only. Normal power is 10 kw.

S358--This assignment is exempt from referral to NTIA by Exception 1 of the domestic fixed policy in Section 8.2.11 of the NTIA Manual.

S359--This assignment is exempt from referral to NTIA by Exception 2 of the domestic fixed policy in Section 8.2.11 of the NTIA Manual.

S360--This assignment is exempt from referral to NTIA by Exception 3 of the domestic fixed policy in Section 8.2.11 of the NTIA Manual.

S361--Multiple transmitting and/or receiving stations operating at FIXED locations are involved in this assignment; and, it is not feasible to indicate all specific locations. (The method of operation must be fully explained in supplementary details when S361 is applied to a frequency assignment.)

S362--One or more transportable transmitting and/or receiving stations are utilized in this assignment.

S366--Operations will be outside of the U.S./ Canada Border Zone or power used while operating in the Border Zone will not exceed 5 watts.

S367--This frequency assignment has been made on an exceptional basis for operation in the National Radio Quiet Zone on the conditions that use shall be minimized consistent with operational requirements and that any technical modification to this assignment shall be coordinated in accordance with NTIA Manual 8.3.9.

S368--Subject to Department of the Interior, Bureau of Reclamation net control.

S369--This assignment is in accordance with Section 8.2.44.

S370--Transportable Earth Station operations in the 7300-7750 MHz and 8025-8400 MHz bands shall be deployed in such a manner as not to cause harmful interference to existing assignments and will adjust to allow additional stations of other radio services in these bands as required.

S371--This assignment is in accordance with Chapter 10 and Part 7.14 of the NTIA Manual.

S372--This assignment for the San Francisco/Pt Reyes area is subject to adjustments to accommodate new systems/programs or reassignments resulting from the implementations of these systems/programs.

S373--This assignment, in the 2700-2900 MHz band, is for operation in a designated heavily used area or for collocated operation (see Annex D of the NTIA Manual). This equipment has the capability of implementing the additional Electromagnetic Compatibility (EMC) provisions of RSEC Criteria D under Section 5.3 of the NTIA Manual. Implementation of this capability may be necessary at a later date

S375--Operations authorized by assignments bearing this note shall be subject to the GMF recording method being developed in accordance with IRAC Doc. 23200/1 (FAS ADM 830029/1).

S376--Operations on this frequency under direct-control of the USDA, Forest Service.

S378--In emergency situations a maximum power of 25 watts for ship stations and 10 watts for coast stations is authorized.

S379--This assignment shall expire upon conclusion of the OPERATION ALLIANCE mission.

S381--Operations under this assignment are for SHARES traffic in accordance with Section 7.3.5 of the NTIA Manual.

S382--This record is retained for spectrum management and analysis purposes and does not constitute an NTIA authority to transmit.

S383--This sounder assignment complies with Section 8.2.21 of the NTIA Manual. The frequency bands listed in paragraph 1.c. of Section 8.2.21 have been suppressed. The information required by paragraph 2 of Section 8.2.21 is provided in the supplementary details of this assignment.

S384--This assignment has been made pursuant to Part 4.3.2 of the NTIA Manual.

S385--This GMF listing identifies passive sensor or Radio Astronomy receiving stations for spectrum management and analysis purposes and does not constitute an NTIA authority to transmit. Interference protection to the receiving station is afforded only to the extent provided in the National Table of Frequency Allocations.

S386--Operations authorized by assignments bearing this note shall be restricted to direct support of the OPERATION ALLIANCE mission, and are subject to the management and control of the U.S. Customs Service.

S387--Upon implementation of narrowband operations this channel will be vacated.

S388--This assignment supports DSCS Operations Center earth stations limited to locations at Fort Detrick, and Fort Meade, Maryland, and Camp Roberts, California. This assignment shall not preclude new terrestrial assignments within or overlapping the frequency band 7250-7750 MHz provided each new terrestrial assignment does not exceed a maximum tolerable interfering power of -141.3 dBm in any 30 kHz bandwidth at the earth station receiver. In addition, this assignment has no priority over either future meteorological-satellite systems (See G104) or terrestrial assignments authorized prior to April 26, 1994.

S389--The bands 2390-2400, 2402-2417 and 4660-4685 MHz were identified for immediate reallocation, effective August 10, 1994, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective August 10, 1994, any Government operations in these bands are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations.

S390--This assignment for wideband telegraphy, facsimile and/or special transmission systems in the Maritime Mobile Service is being made in accordance with the NTIA Manual, Section 8.2.29, paragraph 5.c.(1) and ITU RR4323BI.

S391--This assignment is an expansion or enhancement of an existing system in the 138-150.8, 162-174, or 406.1-420 MHz band which utilizes a band-width greater than 11 kHz.

S392--The bands 2300-2310 and 2400-2402 MHz were identified for reallocation, effective August 10, 1995, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective August 10, 1995, any Government operations in these bands are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations.

S393--The band 2417-2450 MHz was identified for reallocation, effective August 10, 1995, for mixed Government and non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993.

S394--Subject to Department of the Interior, National Park Service, net control.

S395 - The band 4635-4660 MHz was identified for reallocation, effective January 1, 1997, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective January 1, 1997, any Government operations in these bands are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations. However, government operation of mobile (including airborne) systems authorized as of March 22, 1995 within 80km of Pico Del Este, PR (18E 16' N, 65E 46' W), Dam Neck, VA (36E 46' N, 75E 57' W), and St. Thomas, VI (18E 21' N, 64E 55' W) will be permitted on a fully protected basis until January 1, 2009.

S514--This assignment supports NASA Space Program ATS-3.

S518--This assignment supports NASA Space Program ATS-1.

S544--This assignment supports NASA Deep Space Program PIONEER.

S545--This assignment supports NASA/Commerce Earth Exploration Service Space Program LANDSAT.

S553--This assignment shall expire upon completion of Space Project Defense Meteorological Satellite Program Block 5.

S558--This assignment shall expire upon completion of Space Project SAMSO 080-70.

S566--This assignment shall expire upon completion of Space Project Advanced Technology Satellite Global Positioning System.

S567--This assignment shall expire upon completion of Space Project Deep Space Program.

S569--This assignment shall expire upon completion of Space Project Transit Improvement Program (TIP).

S570--This assignment shall expire upon completion of Space Project FLEETSATCOM.

S571--This assignment shall expire upon completion of Space Project LES 8/9.

S572--This assignment shall expire upon completion of Space Project Air Force Satellite Data System.

S573--This assignment supports NASA Space Program IUE.

S574--This assignment supports NASA Space Program ISEE.

S575--This assignment supports NASA Space Program TDRSS.

S576--This assignment supports NASA Space Program Space SHUTTLE (STS).

S578--This assignment supports NASA Space Program NIMBUS-7.

S580--This assignment shall expire upon completion of Space Project Gapfiller (MARISAT).

S584--This assignment shall expire upon completion of Space Project SAMSO 26-79.

S589--This assignment supports NASA Space Program IMP-8.

S594--This assignment is for Space System GOES.

S595--This assignment shall expire upon completion of Space Project GPS Phase II.

S597--This assignment is in support of Navy Space Surveillance System.

S598--This assignment shall expire upon completion of Space Project SOLAR RADIATION SERIES.

S603--This assignment is in support of Space Ground Link Subsystem (SGLS) operations.

S604--This assignment is in support of foreign space operations.

S606--This assignment shall expire upon completion of Space Project NATO IIIA.

S614--This assignment shall expire upon completion of Space Project SAMSO 28-77.

S616--This assignment shall expire upon completion of Space Project DSCS Phase II.

S617--This assignment supports NASA Space Program SAR.

S619--This assignment is in support of the INTELSAT V.

S621--This Application is in support of a DOD Space Project.

S622--This assignment supports NASA Space Program DE-A.

S625--This assignment shall expire upon completion of Space Project IUS.

S626--This assignment shall expire upon completion of Space Project LEASAT (FLTSATCOM-A).

S627--This assignment is in support of the Small Business Satellite.

S629--This assignment is in support of Space System TIROS-N.

S632--This assignment supports NASA Deep Space Program VOYAGER.

S633--This assignment supports NASA Deep Space Program GALILEO.

S634--This note is to be used in conjunction with S604, to reflect assignments used by NASA in a cooperative effort with the European Space Agency (ESA) in support of Space Program ULYSSES (formerly known as the International Solar Polar Mission (ISPM)).

S641--This assignment supports NASA Space Program SPACE TELESCOPE (ST).

S642--This assignment supports NASA Space Program Solar Mesosphere Explorer.

S643--This assignment shall expire upon completion of Space Project DSCS Phase III.

S646--This assignment supports NASA Space Program AMPTE.

S647--This assignment supports NASA Space Program ERBS.

S648--This assignment shall expire upon completion of Space Project GEOSAT-A.

S651--This assignment supports NASA Space Program Space Station.

S655--This assignment supports NASA Deep Space 30 GHz Systems.

S661--This assignment is in support of the Strategic Defense Initiative (SDI) Program.

S662--This assignment is for Common Carrier service provided in a non-Government Domestic Satellite System. The specific frequency and satellite is dependent upon the Common Carrier selected to provide the service.

S664--This assignment shall expire upon termination of the satellite system STATIONAR (USSR).

S665--This assignment is in the INMARSAT space system. If this assignment is for a transportable land-based or aeronautical INMARSAT terminal, it is subject to coordination with the Common Carrier Bureau of the Federal Communications Commission. This coordination will be conducted by the Communications Satellite Corporation in accordance with Annex E, paragraph 3.1.3 of the NTIA Manual.

S666--This assignment is in support of Space Project NATO IV.

S668--This assignment supports NASA Space Program Tethered Satellite System (TSS).

S669--This assignment supports the Volunteers in Technical Assistance (VITA) PACSAT space system.

S670--Non-Government testing of future INTELSAT satellites.

S671--This assignment supports the Orbital Sciences Corporation DATASAT Space System.

S673--This assignment supports NASA Space Program Cosmic Background Explorer (COBE) Satellite.

S674--This assignment supports NASA Space Program Atmospheric Research Satellite (UARS).

S675--This assignment supports NASA Space Program Gamma Ray Observatory (GRO).

S676--This assignment supports NASA Space Program Advanced Communications Technology Satellite (ACTS).

S677--This assignment supports NASA Space Program Astronomical Shuttle Pallet Satellite (ASTRO-SPAS).

S678--This frequency supports AF/DOE Space Project ALEXIS.

S679--This assignment supports NASA Space Program Wideband Data Collection System.

S680--This frequency supports Commerce project Pan-Pacific Educational and Cultural Experiments by Satellite (PEACESAT).

S681--This assignment supports NASA Extra-Vehicular Activity UHF Communications Subsystem.

S682--This assignment supports NASA Space Program Aeroassist Flight Experiment (AFE).

S683--This assignment supports NASA TOPEX/Poseidon (TOPO) Mission.

S684--This assignment supports NASA Space Program Solar Anomalous and Magnetospheric Particle Explorer (SAMPEX) in the Small Explorer (SMEX) Project.

S685--This assignment supports NASA Space Program Wake Shield Facility (WSF).

S686--This assignment supports NASA Explorer Platform (EP).

S687--This assignment supports NASA Tether Dynamics Explorer/Tethered Atmospheric Probe (TDE/TAP).

S688--This assignment supports the Soviet POTOK I space system.

S690--This assignment supports the LIGHT-SAT Satellite System.

S691--This assignment supports NASA Transfer Orbit Stage (TOS).

S692--This assignment supports Motorola Satellite Communications, Inc.'s IRIDIUM space system.

S693--This assignment supports the NASA Telemedicine 18-Month Demonstration Project.

S694--This assignment supports NASA Commercial Experiment Transporter (COMET).

S695--This assignment supports Orbiter-ACTS Flight Experiment (O-AFE).

S696--This assignment supports NASA Tropical Rainfall Measurement Mission (TRMM).

S697--This assignment supports the Deployable Seismic Verification System (DSVS).

S698--This assignment will expire upon completion of the Space Project NATO IV.

S699--This assignment supports NASA RTEAM Hitchhiker.

S700--This assignment supports NASA SeaStar Ocean Color Project.

S701--This assignment supports NASA Energy Transient Experiment (HETE).

S702--This assignment supports experiments with the satellite system S/80-T (French).

S703--This assignment supports the NASA Summer Undergraduate Research Fellowship Satellites I and II (SURFSAT).

S704--This assignment supports the Interfero-metrics, Inc. Space System.

S705--This assignment supports the NASA NEXT SCATTEROMETER (NEXSCAT).

S706--This assignment supports the NASA Space Radar Laboratory 1 (SRL-1).

S707--This assignment supports the Germany SAFIR system.

S708--This assignment supports the NASA Total Ozone Monitoring Spectrometer Earth Probe (TOMS-EP).

S709--This assignment supports the NASA MicroLab-1 mission.

S710--This assignment supports the MILSTAR Communications Satellite System.

S711--This assignment supports the NASA "Shuttle/MIR" Communications System.

S712--This assignment supports DOE proliferation detection and environmental monitoring satellite program.

S713--This assignment supports the NASA Fast Auroral Snapshot Explorer (FAST).

S714--This assignment supports the NASA Submillimeter Wave Astronomy Satellite (SWAS).

S715--This assignment supports the NASA International Solar Terrestrial Program (ISTP) Interplanetary Physics Laboratory WIND.

S716--This assignment shall expire upon completion of the NASA Global Learning and Observations to Benefit the Environment (GLOBE) Program Communications System using the Tracking and Data Relay Satellite System (TDRSS).

S717--This assignment supports the NASA Earth Observing System AM (EOS).

S718--This assignment supports the NASA Mobile SatCom Demonstration using the Tracking and Data Relay Satellite System (MOST).

S719--This assignment supports the NASA Advanced Composition Explorer (ACE).

S720--This assignment supports the NASA Near Earth Asteroid Rendezvous (NEAR).

S721--This assignment supports the NASA MARS PATHFINDER Satellite System.

S722--This assignment supports the NASA CASSINI Satellite System.

S723--This assignment supports the NASA Advanced X-Ray Astrophysics Facility-Imaging (AXAF-I) Satellite System.

S724--This assignment is for commercial service using the Russian LOUTCH WSDRN Satellite.

S725--This assignment is in support of the Small Spacecraft Technology Initiative (SSTI) CLARK Satellite.

S726--This assignment supports the NASA X-Ray Timing Explorer (XTE).

S727--This assignment is in support of the HEALTHSAT-II Satellite.

S728--This assignment supports the NASA Lewis Satellite System.

S729--This assignment supports National Ocean Service experiments with TDRS 174W.

S730--This assignment supports the NOAA K, L, and M Satellite System.

S731--This assignment supports the NASA Polar Plasma Laboratory Satellite System - POLAR.

S732--This assignment supports the CTA Commercial Systems, Inc. space system.

S733--This assignment supports the EARTHWATCH Remote Sensing System.

S734--This assignment supports the E-SAT, Inc. space system.

S735--This assignment supports the NASA Student Nitric Oxide Explorer (SNOE) Satellite System.

S736--This assignment supports the NASA Tomographic Experiment using Radioactive Recombinative Ionospheric EUV and Radio Sources - TERRIERS.

S737--This assignment supports the Hughes Communications Galaxy, Inc. GALAXY VIII (I) Satellite.

S738--This assignment supports the NASA Mars Global Surveyor.

S739--This assignment supports the NASA Transition Region and Coronal Explorer satellite system (TRACE).

S740--This assignment supports the NASA Wide-Field Infrared Explorer satellite (WIRE).

S741--This assignment supports the NASA Lunar Prospector Satellite System.

S742--This assignment is for use by a U.S. Government earth station supporting a foreign space operation. The responsible Federal agency has waived the NTIA spectrum certification process for the earth station operation. Therefore, although this operation may be in accordance with the National Table of Frequency Allocations, it must be conducted on an unprotected, non-interference basis to those U. S. Operations that are in conformity with the National Table of Frequency Allocations.

S743--This assignment shall expire upon termination of the satellite system EXPRESS (Russia).

S744--This assignment shall expire upon completion of Space Project MIGHTYSAT.

S745--This assignment is in support of a Government Space Program.

S746--This assignment supports the NASA Earth Observing System AM (EOS-AM).

S747--This assignment is for a receive only earth station for the IRS-1B Satellite.

S748--This assignment is for a receive only earth station for the IRS-1C Satellite.

S749--This assignment is for a receive only earth station for the ERS-2 Satellite.

S750--This assignment is in support of the Space Test Experiment Platform (STEP 0) program.

S751--This assignment supports the Orbital Sciences Corp. BATSAT MicroStar Spacecraft.

S752--This assignment supports the NASA Gravity Probe-B satellite system.

S753--This assignment supports the NASA International Space Station (ISS) VHF Voice Communications Link (IVVCL).

S754--This assignment is for a receive only earth station in the band 8025-8400 MHz for the Spot 1 and Spot 2 Satellite.

S755--This assignment supports the NASA SIMPLESAT Satellite System.

S756--This assignment supports the NASA Technology Experiment Augmenting Spartan (TEXAS).

S757--This assignment supports the NASA SPRINT Communications System (SCS).

S758--This assignment is in support of the PANAMSAT PAS-6 and PAS-7 Satellites.

Endnotes for Annex A-F

¹ Applies to SSB transmissions.

² Applies to two or more independent sideband channels.

ANNEX G - LIST OF DOD-APPROVED SYSTEM IDENTIFIERS

DoD has approved the following list of data entries for use in Data Item 705.

ADMINISTRATIVE	COMMANDER,GLOBAL
ADMINISTRATIVE,BASE OPERATIONS	COMMANDER,GWEN
ADMINISTRATIVE,CEREMONIAL	COMMANDER,HICOM
ADMINISTRATIVE,GIANT VOICE	COMMANDER,MISSION RADIO
ADMINISTRATIVE,HARBOR-PORT-OPS	COMMANDER,OR
ADMINISTRATIVE,INTEL	COMMANDER,PACCS
ADMINISTRATIVE,INVENTORY CONTROL	COMMANDER,REGENCY
ADMINISTRATIVE,LOGISTICS	COMMANDER,SAS
ADMINISTRATIVE,MARITIME DEFENSE	COMMANDER,SQUADRON COMMON
ADMINISTRATIVE,NAVY EXCHANGE NET	
ADMINISTRATIVE,PILOT TO DISPATCH	CONSTRUCTION
ADMINISTRATIVE,POST OPERATIONS	CONSTRUCTION,CIVIL WORKS
ADMINISTRATIVE,RAMP CONTROL	CONSTRUCTION,INSPECTION
ADMINISTRATIVE,SAFETY	CONSTRUCTION,MAINTENANCE
ADMINISTRATIVE,SPECIAL OPERATIONS	CONSTRUCTION,PRIME BEEF
ADMINISTRATIVE,SUPPLY	CONSTRUCTION,SEABEES
ADMINISTRATIVE,WAREHOUSE RETRIEVAL	CONSTRUCTION,SHIPYARD
AIR TRAFFIC CONTROL	CONTINGENCY
AIR TRAFFIC CONTROL,APPROACH	CONTINGENCY,BARRIER
AIR TRAFFIC CONTROL,ATIS	CONTINGENCY,DA COOP
AIR TRAFFIC CONTROL,DBRITE	CONTINGENCY,DSCS
AIR TRAFFIC CONTROL,DEPARTURE	CONTINGENCY,DISASTER PREPAREDNESS
AIR TRAFFIC CONTROL,ENROUTE	CONTINGENCY,EOC
AIR TRAFFIC CONTROL,GROUND	CONTINGENCY,EOD
AIR TRAFFIC CONTROL,LOCAL	CONTINGENCY,GWEN
	CONTINGENCY,MOBILITY
BACKBONE	CONTINGENCY,MOBILIZATION
BACKBONE,AFSAT	CONTINGENCY,NCS
BACKBONE,CIVIL WORKS	CONTINGENCY,NEMVAC
BACKBONE,DSCS	CONTINGENCY,NTCN
BACKBONE,DSP	CONTINGENCY,SAR
BACKBONE,MILSTAR	CONTINGENCY,FEMA
COMMANDER	EXECUTIVE
COMMANDER,(Any legal character or number)	EXECUTIVE, (Any legal character or number)
COMMANDER,AIR DEFENSE	EXECUTIVE,ERCS
COMMANDER,AWACS	EXECUTIVE,MYSTIC STAR
COMMANDER,C2	EXECUTIVE,SITFA
COMMANDER,COMMANDO ESCORT	EXECUTIVE,WWABNCP
COMMANDER,COMMPPLAN113	
COMMANDER,GIANT TALK	FIRE

FIRE,ALARM
FIRE,CRASH
FIRE,EMS
FIRE,HAZMAT
FIRE,MUTUAL AID
FIRE,TRAINING

HYDROLOGIC

INSPECTION
INSPECTION,ATC
INSPECTION,BEET
INSPECTION,IG

LAW ENFORCEMENT
LAW ENFORCEMENT,ALARM
LAW ENFORCEMENT,CB EMERGENCY
LAW ENFORCEMENT,CID
LAW ENFORCEMENT,MUNITIONS
LAW ENFORCEMENT,MUTUAL AID
LAW ENFORCEMENT,NISO
LAW ENFORCEMENT,NUCLEAR
LAW ENFORCEMENT,OSI
LAW ENFORCEMENT,SECURITY
LAW ENFORCEMENT,SPEED GUN
LAW ENFORCEMENT,TRAFFIC CONTROL

MAINTENANCE
MAINTENANCE,ACMI
MAINTENANCE,AIRCRAFT
MAINTENANCE,CONTROL
MAINTENANCE,CIVIL ENGINEERS
MAINTENANCE,EQUIPMENT CHECKS
MAINTENANCE,INDUSTRIAL CONTROLS
MAINTENANCE,MINUTEMAN MISSILE
MAINTENANCE,MUNITIONS
MAINTENANCE,NAVAIDS,COMM
MAINTENANCE,PILOT TO MAINTENANCE
MAINTENANCE,PUBLIC WORKS
MAINTENANCE,RIDS
MAINTENANCE,SCANS
MAINTENANCE,SHIP OVERHAUL
MAINTENANCE,SNOW REMOVAL
MAINTENANCE,TEST-CALIBRATION

MEDICAL
MEDICAL,AMBULANCE
MEDICAL,EMS
MEDICAL,MUTUAL AID

MISC
MISC,AERONAUTICAL
MISC,AFPBS
MISC,AIR GROUND ADVISORY

MISC,AIR-GROUND-AIR
MISC,BATTLEFIELD SURVEILLANCE
MISC,BROADCAST
MISC,DISTRESS AND SAFETY
MISC,EOD
MISC,FLEET SUPPORT
MISC,FLIGHT SUPPORT
MISC,HF COAST TELEPHONY
MISC,HF COAST WIDEBAND
MISC,HF NBDP
MISC,HF PACKET
MISC,HF SHIP-SHORE-SHIP
MISC,HF SHIP WIDEBAND
MISC,HF TELEPHONY DUPLEX
MISC,HF TELEPHONY SIMPLEX
MISC,IFF
MISC,LOCKS AND DAMS
MISC,MARITIME
MISC,MICROWAVE
MISC,NASA
MISC,RADAR
MISC,RDTE SIMULATOR
MISC,RDTE
MISC,SMECS
MISC,SPACE
MISC,SPACE SHUTTLE
MISC,TELEMETRY
MISC,WEAPONS

MOBILE TELEPHONE

NATURAL RESOURCES
NATURAL RESOURCES, GAME WARDEN

NAVAIDS
NAVAIDS,ASR
NAVAIDS,BUOYS
NAVAIDS,GCA
NAVAIDS,GLIDESLOPE
NAVAIDS,GPS
NAVAIDS,IFF-SIF
NAVAIDS,LOCALIZER
NAVAIDS,LORANC
NAVAIDS,MARKER BEAKON
NAVAIDS,RADAR ARTCC
NAVAIDS,SONOBUOY
NAVAIDS,TACAN
NAVAIDS,VOR
NAVAIDS,VORTAC
NAVAIDS,PAR
NAVAIDS CONTROLS
NAVAIDS CONTROLS,RUNWAY LIGHTS

PAGING
PAGING,ALERT
PAGING,CENTRAL BASE
PAGING,MEDICAL

RDTE SUPPORT
RDTE SUPPORT,(Any legal character
or number)

SEISMIC
SEISMIC,STUDIES

SMR

SPECIAL COURIER
SPECIAL PROJECTS
SPECIAL PROJECTS,ASCOMM
SPECIAL PROJECTS,ASW
SPECIAL PROJECTS,BLUE ANGELS
SPECIAL PROJECTS,CAP
SPECIAL PROJECTS,DATA LINK
SPECIAL PROJECTS,EATS
SPECIAL PROJECTS,EOD
SPECIAL PROJECTS,FORACS
SPECIAL PROJECTS,GCCS
SPECIAL PROJECTS,GYC8
SPECIAL PROJECTS,HAVE QUICK
SPECIAL PROJECTS,HF/ALE
SPECIAL PROJECTS,INTEL
SPECIAL PROJECTS,JTIDS
SPECIAL PROJECTS,LINK 11
SPECIAL PROJECTS,LINK 16
SPECIAL PROJECTS,LOW POWER
SPECIAL PROJECTS,MARS
SPECIAL PROJECTS,MCM
SPECIAL PROJECTS,METEOR BURST
SPECIAL PROJECTS,NISTARS
SPECIAL PROJECTS,NTDS
SPECIAL PROJECTS,ORDCOMM
SPECIAL PROJECTS,OTH-B
SPECIAL PROJECTS,ROTHR
SPECIAL PROJECTS,SHARES
SPECIAL PROJECTS,SOF
SPECIAL PROJECTS,SOUNDER
SPECIAL PROJECTS,SURTASS
SPECIAL PROJECTS,TACTS
SPECIAL PROJECTS,TEMPEST
SPECIAL PROJECTS,THUNDERBIRDS
SPECIAL PROJECTS,TIS

SURVEY
SURVEY,GEODETIC
SURVEY,HAZMAT
SURVEY,MAPPING

TELECOMMAND
TELECOMMAND,BARRIER
TELECOMMAND,COMMAND DESTRUCT
TELECOMMAND,DRONE
TELECOMMAND,TARGET
TELECOMMAND,TOSS
TELECOMMAND,UAV

TEST RANGE
TEST RANGE,CINETHEODOLITE
TEST RANGE,CONTROL
TEST RANGE,SAFETY
TEST RANGE,SIMULATOR
TEST RANGE,TARGET SCORING
TEST RANGE,TIMING

TRAINING
TRAINING,ACMI
TRAINING,ENGINEERING
TRAINING,EW
TRAINING,EXERCISE
TRAINING,MICROWAVE
TRAINING,MSE
TRAINING,RADIO RELAY
TRAINING,SINGARS
TRAINING,STRC
TRAINING,TACCS
TRAINING,TROPO

TRANSPORTATION,(Any legal character or number)
TRUNKING

UTILITIES
UTILITIES,ENERGY CONTROL
UTILITIES,TELEPHONE
UTILITIES,WATER

WEATHER
WEATHER,METEOROLOGICAL
WEATHER,PILOT TO METRO
WEATHER,RADAR
WEATHER,RAWS
WEATHER,RECON

WIRELESS MIKE

ANNEX H

STANDARDIZED STATUS CODES USED FOR STATUS TRACKING

1. The following standard status codes are used in SFAF Data Item 903 to track the status of frequency assignment proposals within the FRRS transaction processing system. Additional local status codes can be assigned by any system manager. These codes will be phased out when the DCFs and JSMSw are replaced by Spectrum XXI.

STATUS CODE	DESCRIPTION	SET BY
ACT	The proposal has been transferred to another DCF for coordination with other military services.	System
ASN	The proposal is approved, but last minute changes can be made to the record before setting the status to TRN.	User
ATE	The proposal has been successfully transferred to the JSC.	System
COR	The proposal is being held locally while some form of coordination is being conducted.	User
DUP	The proposal has been successfully download from the JSC CCF to the remote DCF MicroVAX site to reflect the decisions at the IRAC/FAS meeting.	System
ERR	The proposal with parsing errors has been received at the local site.	System
FAS	The validated proposal is ready for review by the agency's FAS representative (applies only to MILDEPs).	User
INC	The proposal is at NTIA and is being voted upon by other government agencies.	System
NTIA	The JSC has sent the proposal to NTIA.	System
PCM	The proposal has been downloaded to a PC for modification. System	
REC	The proposal has been received at the local site.	System
REJ	The proposal has been withdrawn from NTIA by the responsible agency.	System

Status Code	Description	Set By
REV	The Proposal has been revised or edited.	User
RFN	The proposal is being converted by the JSC to the GMF format so it can be sent to NTIA.	System
RTA	The proposal was sent to the JSC and returned to the submitting agency because of errors serious enough to be rejected either by the JSC or by NTIA.	System
STA	Short term assignment.	User
TAB	The proposal has been tabled by NTIA or another government agency and is currently awaiting MILDEP FAS representative action.	System
TRN	The validated proposal is ready for transfer to the JSC or to another DCF.	User

APPENDIX B - ACRONYMS

The following acronyms are used throughout this document. Acronyms extracted from the NTIA Manual and placed in Annexes A-G of Appendix A for reference use have not been included here.

AAG	Aeronautical Advisory Group
AMSL	Above Mean Sea Level
ACTF	Agenda Action File
AFC	Area Frequency Coordinator
ASCII	American Standard Communications Information Interface
AUTODIN	Automatic Digital Network
BR	Radiocommunications Bureau (formerly IFRB)
CCF	Central Computer Facility
C-E	Communications-electronics
CINC	Commander-in-Chief
CINCCENT	Commander-in-Chief, Central
CINCEUR	Commander-in-Chief, Europe
CINCPAC	Commander-in-Chief, Pacific
CINCSO	Commander-in-Chief, South
CONUS	Continental United States
DCF	Distributed Computer Facility
DCS	Defense Communications Systems
DISA	Defense Information Systems Agency
DMS	Defense Message System
DoD	Department of Defense
EC	Earth Coverage
ECCM	Electronic Counter Countermeasures
ECM	Electronic Counter Measures
EMC	Electromagnetic Compatibility
ERP	Effective Radiated Power
EUCOM	European Command
EW	Electronic Warfare
FAA	Federal Aviation Administration
FAS	Frequency Assignment Subcommittee
FCC	Federal Communications Commission
FMO	Frequency Management Office
FMSC	Frequency Management Sub-Committee (formerly ARFA)
FRRS	Frequency Record Resource System
GAFC	Gulf Area Frequency Coordinator
GE	Germany
GMF	Government Master File
HF	High Frequency
IAW	In Accordance With
IRAC	Interdepartment Radio Advisory Committee
ITU	International Telecommunication Union
JCS	Joint Chiefs of Staff
JFP	Joint Frequency Panel
JFMOLANT	Joint Frequency Management Office, Atlantic
JNTSVC	Joint Service
JSC	Joint Spectrum Center
JSMS _w	Joint Spectrum Management Systems for windows

LANTCOM	Atlantic Command
MAG	Military Advisory Group
MAJCOM	Major Commands
MCEB	Military Communications – Electronics Board
MILDEP	Military Department
MRFL	Master Radio Frequency List
NAVAIDS	Navigation Aid System
NATO	North Atlantic Treaty Organization
NSA	National Security Agency
NTIA	National Telecommunications and Information Administration
OUS&P	Outside United States & Possessions
PC	Personal Computer
PD	Pulse Duration
PLAD	Plain Language Address
PRR	Pulse Repetition Rate
PPS	Pulses Per Second
PO	Periodic Output
RDTE	Research, Development, Test & Evaluation
SFAF	Standard Frequency Action Format
SIPRNET	SECRET Internet Protocol Router Network
SOPs	Standard Operating Procedures
SCG	Security Classification Guide
US	United States
US&P	United States and Possessions
USACOM	United States Atlantic Command
USAF	United States Air Force
USCINCEUR	US Commander-in-Chief, Europe
UIC	Unit Identification Code
USMC	United States Marine Corps
YYYYMMDD	the four digit year - two digit month - two digit day

APPENDIX C - DISTRIBUTION

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APPENDIX D – SUMMARY OF MAJOR CHANGES

1. This is a complete revision of the DoD Standard Frequency Action Format (SFAF). It replaces MCEB PUB 7 dated 1 December 1997 with Change 1 dated 1 March 1998.

a. The following significant changes were made in the main part of the document.

Data items 014-019 were added to the lists of required items in paragraphs 2a(5), 3f(2) (in the first and fourth paragraphs), 3f(3), and 3f(5).

In paragraph 3b(1), data item 804 was removed as a data item that can contain a slash “/”

In paragraph 3b(2), data items 014, 018, and 804 were added as data items that can have a comma as part of the data entry.

In Figure 1, data item 702 was changed from SAC to ACC.

In Figure 2, data items 014 and 015 were added and the unclassified caveat line was removed from the message heading.

In Figure 3, data item 203 was added.

In Figure 4, TAC was changed to ACC.

In Figure 5, data item 203 was added and data item 141 was changed.

In Figure 6, data item 203 was added.

In paragraph 4a(3)(a), the wording was changed to refer to data item 015 vs data item 503 and the text entry in data item 015 was changed.

In paragraph 4a(3)(c), the last sentence was added.

In Figure 7, data in item 503 was moved to new data items 014 and 015, and data item 141 was changed.

Paragraph 4a(3)(a)3 was deleted.

In Figure 8, data items 006, 014, and 015 were added.

Text was added to paragraph 4a(3)(f)1, a new paragraph 4a(3)(f)2 was inserted, and the rest of the subparagraphs were renumbered.

Paragraph 4b and 4b(1-2) were modified to permit FRRS records with SECRET data in either of SFAF data items 102 or 110 to only go to NTIA in "Z" docket document form.

In Table A1, data items 014-019 were added, the length of data item 015 was changed from 35 characters to 72 characters, the number of occurrences of data item 341 were changed from 1 to 3 and the number of characters were changed from 5,18 to 5,29, and numerous date field size changes were made as noted in the individual items listed below. Corrections were made to the several JSMSw / Spectrum XXI and GMF Tags in the table and in the individual items following the table.

b. The following list of SFAF items in Appendix A have been significantly changed in this document.

SFAF ITEM	CHANGE
005	The field length was changed form 2,6 to 2,10 characters, the GMF tag information was corrected, some of the entries were reformatted to add the extra characters and the examples were corrected.
006	The field length and examples were changed.
014	The Derivative Classification Authority was moved from data item 503. CLF and the examples were changed.
015	The Unclassified Data Fields data was moved from data item 503. CLU and the length was changed form 35 to 72 characters.
016	The Extended Declassification Date was moved from data item 503. CDE and the examples were changed.
017	The Downgrading Instructions were moved from data item 503. DNG and the examples were changed.
018	The Original Classification Authority was moved from data item 503. CLA and the examples were changed.
019	The Reason for Classification was moved from data item 503. CLR and the examples were changed.
106.2	The field length was changed to 8 characters and the example was changed.
107	The field length was changed to 8 characters and the example was changed.
108	Some example dates were changed.

- 113 The Submitted to IRAC information was added.
- 115 An example was changed to show how to enter less than 1 watt of power.
- 140 The field length was changed to 8 characters and the example was changed.
- 141 The field length was changed to 8 characters and the example was changed.
- 142 The field length was changed to 8 characters and the example was changed.
- 143 The field length was changed to 8 characters and the example was changed.
- 303 A note was added.
- 341 The field size was changed from 5,18 to 5,29 characters and the number of occurrences were changed from 1 to 3.
- 373 The title was changed.
- 403 A note was added.
- 459 The examples were changed.
- 473 The title was changed.
- 503 Security information was removed from this data item.
- 705 Added three new entries:
ADMINISTRATIVE,GIANT VOICE
ADMINISTRATIVE, RAMP CONTROL
CONTINGENCY,BARRIER
- 803 An example was added.
- 805 The field length was changed to 8 characters and the example was changed.
- 903 The text was modified to refer to Annex H for a list of standardized status codes used for status tracking.
- 904 The field length was changed to 8 characters and the example was changed.
- 911 The field length was changed to 8 characters and the example was changed.
- 927 The field length was changed to 8 characters and the example was changed.

928 The field length was changed to 8 characters and the example was changed.

953 The field length was changed to 10 characters and the examples were changed.

957 The field length was change to 4 characters and the example was changed.

Annex H to Appendix A was added.